

PROP

F/C C/F/O

SUPV

LOG

1

3-3-68 - HUBER

- 1. PER POLICY LETTER #10 WE NOW HAVE A HARD BOUND LOG BOOK.
- 2. JACK: BUCHAK'S PERFORMANCE APPRAISAL SHEET ENCLOSED. HAVE A BALL.
- 3. NOTE ENCLOSED LETTER RELATED TO A NEW LOG BOOK.

3-4-68, THIRD SHIFT DEAMAN

- 1. OCP 4224 IN SEQ 02 RUNNING SLOW. THERE ARE PROBLEMS.
- 2. 1201 IN HOLD ALL NIGHT WORKING ON TUBES. PICKED UP SEVERAL MORE DR'S AGAINST DINGS ^{OR} QUESTIONABLE CLEANLINESS OF ONE TUBE FURNISHED ON SECOND SHIFT.
- ③ 4224 SEQ 3. CONFIGURING FOR S/M NORMAL COILS.

3/4/68

- ① Still having hardware problems on 1201. Looks like flange on Fuel Cell side is damaged. Fill back looking for Pratt Whitney
- ② Bill - please remember Yehon will have weekend off. He has worked 44 consecutive days.

over

THIRD SHIFT 3-5-68 + P.W.

① DECISION BY ENGINEERING AND BY THE RUPY MEDINA TO REMOVE FUEL CELL BECAUSE OF QUESTIONABLE FLARE. ENGINEERING DISPOSITIONING DR TO THIS EFFECT. LEAK CHECK OF REPLACEMENT F.C. IS IN WORK. NEW FITTING BRAZED IS. ~~THE~~ F.C. REMOVAL WILL BE BY FARE TICKET OR DR? JUST HOW THE NEW ONE GETS IN TO INSURE OOP. CONFIGURATION WILL PROBABLY HAVE TO BE DONE BY DR. OR FARE TICKET

② DR #4 4224 REQUIRES TVAR.

end Shift 3/5/68

① ZTV1 Had Roy D. check configuration (flex hoses, calib, gages etc.) for 0131 - he said RCS was ready to go.

② 101 Alex & Walt worked DR #20 most of night - got s/c counters to work ok

③ Fuel Cell - Walt Y. worked most of night prechecking line Assy for fuel cell. They've gone thru several fittings + voi-shans. Looks like the low torque limit (126#) from D & W is causing this problem.

3RD SHIFT 3-6-68 DEAMMAN

① LINE INSTALLED & LEAK CHECKED WITH SOAP SOLUTION AND OK, BUT MASS SPEC WAS NOT OPENED. MASS SPEC CHECKED AND LINE DID NOT LEAK AT F.C. INTERFACE, HOWEVER IT LEAKED ON S/C SIDE BECAUSE ONLY 126" LBS OR TORQUE. TORQUE BEING INCREASED.

3RD SHIFT

② OCP 0131 IN PRE-TEST EXPECT TO BE IN SECTION II BY NOON. HAAA.

③ D. NEWMAN SICK, SORE THROAT.

④ I PLAN ON TAKING TONIGHT OFF. HOW ABOUT CHECKING IN 1201 COVERAGE ON THIRD?

2nd Shift 3/6/68 DMR

① Bill - regarding PU valve tests on 101 using a spare? PU valve. It sounds like engineering is running on R & D test - there is a standard Apollo Test Request form that should be used for this activity. We're in a bad position here using a part (spare valve) with no paperwork on it. We could (1) short out vehicle wiring (2) buy up a connector - doing this type of tests. This test will use test time (techs, test conductors, QC.) to gather engineering info which may or

may not resolve DR 20. Dng contacted Project Engr. & everyone got together with the following plot.

1. Quality valve to be used - in BME Area
2. After verification on step 1 proceed to troubleshooting vehicle valve.

The above is documented on a TPS & signed by all parties - T. Blank for NASA gave permission to qualify valve in BME only - w/d sgo. type signature for rest of test.

3/6/68 cont'd

From now on please leave notes on what occurred on lot - especially pertaining to any agreements made. Please don't ~~agree~~ agree to tests which legally can't be done.

(2) 1201 going fairly well. Was created all night on Sunday 1518. Don't know how we got into this, but please inform everyone they can't be run concurrently. Protect portions on 1518 - shut down the tank farm - if this had been done 1201 ~~it~~ would be completely out of configuration & loss of pressure on P/C cell could result.

Give list to C. Hannon on the portions of protect which could be run ~~on~~ (4.2 etc.) safely without conflict with 1201.

DJR 3/6/68

3/7/68-HUBER

1. DON! ON THE PU VLU. REGARDLESS OF WHAT IT "SOUNDS LIKE" WE WILL NEED THESE TESTS TO SELL OCP 4120 DR[#]20.

I DIDN'T AGREE TO ANYTHING THAT COULDN'T BE DONE LEGALLY. I AGREED THAT THE PU VLU. TESTS WOULD BE RUN - THEY WILL BE RUN. THE QUALIFICATIONS ON THE SPARE VLU. WERE NOT DISCUSSED YESTERDAY & WHEN YOU FOUND OUT LAST NITE THAT IT HAD NO BACKUP PAPER YOU DID THE ONLY THING YOU COULD DO - YOU CHECKED IT OUT BEFORE INSTALLATION.

THE CURRENT PU VLU. PLOT IS AS FOLLOWS:

1. GET THE CABLES BUILT THAT ARE REQD. TO RUN THE TPS. (THE CABLES BUILT LAST NITE HAD IMPROPER CONNECTORS).
2. RUN THE TESTS PER EXISTING T/S OPEN ENDED TPS.
3. ENGR. IS REQD. ON STATION FOR MOST OF TPS. THEY PROBABLY WILL NOT BE ABLE TO SUPPORT ON 3RD SHIFT. IF SO TEST WILL BE SHUT DOWN.
4. I WOULD LIKE CORNWELL, RIVERA & SAVALA (IF ENGR. AVAIL.), TO WORK THIS.

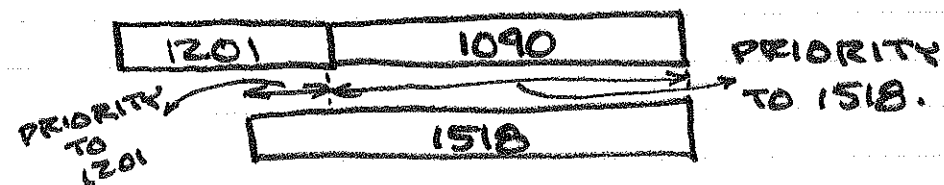
CABLES SHOULD BE READY BY 2ND SHIFT.

KASPAS
McKELLAR

2. PLANNING TO START OCP 4224 RETEST (SEQ. 2 & PART OF SEQ. 3) TOMORROW A.M. RETEST REQ'D SINCE DATA REVIEW OF LAST RUN SHOWED POOR DATA & MARGINAL VALUE RESPONSE PERFORMANCE. IF POSSIBLE HAVE O'CONNELL & BERG FOLLOW PRE-TEST.

3. OCP 1201 SHUT DOWN MOST OF DAY DUE TO LEAKING LV19. FUEL CELL CANNOT BE INST'D. UNTIL LV19 REPLACED SO THAT WE CAN PROVIDE A PURGE DURING HOOKUP.

4. PLOT ON OCP'S 1201, 1090 & 1518. THE PLAN IS TO RUN IN PARALLEL (WHERE POSSIBLE). NAMELY:



THERE ARE 2 OBVIOUS PROBLEMS:

1. WHERE THE HELL DO WE GET THE PEOPLE?

ANSWER: BORROW ELLIS COOKE, JOHN BURBRIDGE & RALPH ORR & USE AS STC'S.

2. THERE ARE SOME PORTIONS OF 1518 THAT ARE TECHNICALLY INCOMPATIBLE WITH 1201/1090.

ANSWER: THEN ONE OCP GOES INTO A HOLD. 1201 HAS PRIORITY WHILE ON AIR THEN

PRIORITY SHIFTS TO 1518. THE POINT IS THAT PARALLEL TESTING SHOULD BE POSSIBLE 50% OF TIME IF ONE OCP IS HELD THE OTHER IS READY TO GO.

5. THE WEEKEND O.T. SCHEDULE ENCLOSED, PLEASE FILL OUT IN PENCIL.

3/7/68 2nd DMR

① Picked up Connell's check - its in his desk.

② What's the status on shift rotation @ end of month?

1201 ③ Tried to install 3rd fuel cell but had interference problem with GSE. Trying to fix (cut out portions of flange) GSE @ 2300 hrs

④ ZTVI - Finly went home early - neighbor ~~had~~ sick.

Alex replaced him in control room. Master Alan's problem. Nothing fixed in with propulsion area.

⑤ 1518 not of pretest run which could be run (4.2 etc.) Burbridge too waiting TVARS to temporarily delete tank farm & valve bay area.

3RD SHIFT BEAMAN 3-9-68

- ① THE ARRANGEMENT TO RUN 1518 WITH 1201 WAS UNKNOWN TO MR ORR. 1201 STILL HELD UP ON DR'S ON CONNECTOR AND MAYBE MORE
- ② SAVALA & BERG TRYING TO GET Q.C. COVERAGE ON TPS AT 0600.
- ③ TYLER & AMES ON STATION 0131.

3-8-68-HUBER

Don't understand? DMR

1. PLOT ON 1201/1090 & 1518 ENCLOSED.
2. DON: HAVEN'T SUBMITTED NEXT MOS. SHIFT ROTATION YET. (I was interrupted)

3/8/68 DMR 2nd Shift

- ① 4224 checking CM7, QCC with PU valve check. Started retest 3:03 @ 2330 hrs when PU valve test stopped (see below) Rivera running test
- ② PU valve test (TPS V37-SP5-018) ~~at~~ were going well valve just about aligned when voltage drop was noticed. Valve voltage is now 1/2 what it should be (2330 hrs). (Alex running)

1201

- ③ Fuel Cell - Fuel cell leaked @ some B-but where the 2nd cell leaked. Have world's greatest madcap man working problem.

- ④ 1518 - can't start. 2 plugs (SK-20-207 P2, P3) pulled by 4224 retest are needed for this test. Everyone was very sorry!

3/9/68 DMR 3rd Shift

4224

- ① 4224 in work by Manny S. Plugs P2, P3 on SK-20-207 must be pulled to start 1518. Looks like several hours of test left on 3:03

PU Valve

- ② PU Valve + connectors taken over to BMC are for further testing. Work effort stopped @ 2400 hrs - no aug. support. Eng. will be in early this AM for further testing effort

1201

- ③ Fuel Cell installed (last one) looks tight. Leak fixed in 4 hrs. (Don Newman)

1518

- ④ 1518 still in hold till 4224 completes testing. Ellis Cooke will run when ready

~~will~~ Will be in 1-2 hrs tonight @ 1830 hrs to keep things rolling.

3-9-68 THIRD & FIRST J. BEAMAN

- ① PROBLEM WITH SEALS BLOWING ON VACUUM PUMP. WHEN SYSTEM BEING VENTED PRESSURIZES VACUUM PUMP EXHAUST. SEALS FIXED AND TVAR GENERATED TO CHANGE EXHAUST CONNECTION. THIS CHANGE WAS COORDINATED WITH RON KISHER FROM GSE BUNCH.

- ② MANNY RAN DATA FOR 4224 HE WAS CONCERNED ABOUT THE DATA COLLECTED BUT FOUND OUT THE CHANNELS WERE NOT REQUIRED. WITH THIS COMPLETED OK TO GO INTO 1518.

3/10/68-HUBER

1. SHIFT ASSIGNMENTS FOR 31 MARCH TO 1 JUNE
HAVE BEEN SUBMITTED AS FOLLOWS:

	<u>2ND</u>	<u>3RD</u>
PROPULSION	* CORNWELL	AMES
	O'CONNELL	* BERG
	RIVERA	* SAVALA
	# SHIMIZU	TYLER
	* FINLEY	
P/C-CRYO.	* YAHN	* NEWMAN
	MASUMOTO (ARRIVES 3/10)	BUCHAK

IT IS EXPECTED THAT THOSE MARKED
WITH AN * WOULD BE THE 2ND/3RD BASE
(i.e., OTHERS WOULD SHIFT BACK TO 1ST
WHEN NOT BUSY).

3/9 - 3/10 Nights DMR

Bill
Action

1. Finley requested that he be left on 2nd shift

status @ 2400 hrs (shift change)

② 1518 in seq 034 & running strong
Donis 2nd, Newman 3rd

③ ~~1090~~ 1090 Ellis Cook writing TVARS. Operations
vainly trying to complete pretest & get ok on Sect II
Ellis 2nd, Buchak 3rd if it runs

④ 1201 T. Buchak working on DR's 3rd shift

⑤ PU valve - augr. left at 2100 hrs - no
further effort.

⑥ cont'd. PU valve. - TPS which was performed
has no inspection stamps - for days
on 2nd shift. 2nd shift will get there's
tomorrow - remind 1st (Harrison) to get
his portion stamped off.

Status ~~1090~~⁰⁶⁰⁰ hrs DMR 3/10

⑥ 1518 Seq 37 (Newman)

1090 still in pretest

3-11-68-HUBER

1. FINLEY CUT FOR 2ND, O'CONNELL
FOR 1ST.
2. SINCE 0131-ZTUI OVER & NO
OPEN PROP. DR'S. I HAVE ASKED
XTRA PROP. TYPES ON 2ND &
3RD (i.e., RIVERA, O'CONNELL, AMES
& TYLER) TO RETURN TO 1ST.
3. PU VALV. C/O CONTINUING ON 2ND,
FINLEY FOLLOWING IT. WILL
SHUTDOWN BEFORE 3RD.
4. TPS ON WORK TO CHECK 101'S
BAD RCS ROLL ENGINE.
DUTTON ON BOARD, SUGGEST
SAVALA PICK IT UP.
5. 1518 HELD UP ALL DAY
GETTING GSE READY FOR
SEQ. 38 & SUBS. I WANT
COOKE & BURDRIDGE TO WORK
1518 LEAVING YAHN & NEWMAN
FREE TO SELL/RESEARCH DR'S.

3/11/68 - 3/12/68 nights DMR

① Bill - the new? bulletin board in the office is the one I was using to post items for second shift. - I found the 101's which were removed from it but am still looking for the 2nd shift Fluid/Make sign, ~~the~~ Whoever is dickering with it ~~to~~ tell them to knock it off - this board is mine - I got it from E.A. Hadley when he moved. I will be taking it with me when we move. DMR

Board relocated to original position outside office.

② Status 2000 hrs DMR

1518 In seq 05-012 (Ellis looks)

1201 DR's being worked by W. Yahn + Newman

1090 Pretest complete - awaiting TCL 1st shift

* Regarding ~~the~~ Heater c/o EO # M66B206 - A call was put thru to Rudy after I talked with you last night. The amount of retest req'd was explained to him. He requested that we immediately write up IVAC's to accomplish intent of E.O. W. Yahn working on this - D. Newman will pick up on third. E.O. release being expedited by Proj. Engrs.

P.V. Valve testing halted @ 2000 hrs - still could not duplicate γ c failure. Engr. will pick up on it tomorrow.

3-12-68-HUBER

1. ON BULLETIN BOARD. YOUR NAME WASN'T ON IT & YOU CAN'T BLAME ME FOR TRYING.

2. ON WRITING TUARS FOR O₂ & H₂ THERMOSW. E.O. CHECK & DOING IT NOW US. DOING IT LATER ON TPS. WE BLEW 9 HRS. ON THIS ONE (11PM TO 8AM); WE WILL DO IT LATER ON TPS. I HAD A CONSULTATION SESSION WITH HANNON & A CHAT WITH MEDINA. MEDINA ASSURED ME THAT THE REDIRECTION WILL CEASE. RUDY NOW CONCURS WITH DOING IT LATER ON A TPS.

Johnson will write TPS on days

3. PLOT:

1. USE ENGR. TYPES (COOKE & BURBRIDGE TO RUN 1518).

2. USE YAHN & NEWMAN TO SELL 1090 CONSTRAINTS (YAHN HAS NEW LIST - 9 CAT. I's); TO WRITE TUARS & TO GET 1090 ON AIR.

4. WITH YAHN & NEWMAN ON 1090 PRETEST/CONSTRAINTS THE ENGR. TYPES MIGHT GET GOOSY ABOUT BEING ON STATION ALONE. IF SO PARK A PROPULSION TYPE ALONGSIDE THEM TO HANDLE R-START & PROCEDURE GLITCHES. DUTTON/FINLEY DOING THIS.

3/12 - 3/13 nights DM R

① 1518 running OK till 2330 hrs. Vehicle powered down due to control room problems - facility air conditioning to ACE.

Powered up about 0200 hours. 1518

② say 04-017 ~~xxxx~~ @ 0400 hours. Ellis Cooke + Finley 2nd shift. Burbridge 3rd shift - (did not want RC's help.)

③ 1090 All cat I complete - ready to go into test @ 0500 hrs. Yahn, Newman, Buchak worked off constraints

④ Propulsion - no activity - need inputs (work etc) from days for 2nd + 3rd shift.

had to hold awaiting 10030, 10058 verification

3/13/68 - HUBER

1. PAUL MASHIMOTO (NEW F/C TYPE) WILL ARRIVE NEXT MON. HE WANTS PERMANENT 2ND. I WILL HAVE HIM ON 1ST FOR THE 1ST WK. OR TWO.

3/13 - 3/14 nights DM R

① 1518 in say 43-002 @ 2300 hrs some configuration problems while running parallel with 1090 (Ellis Cooke + Finley)

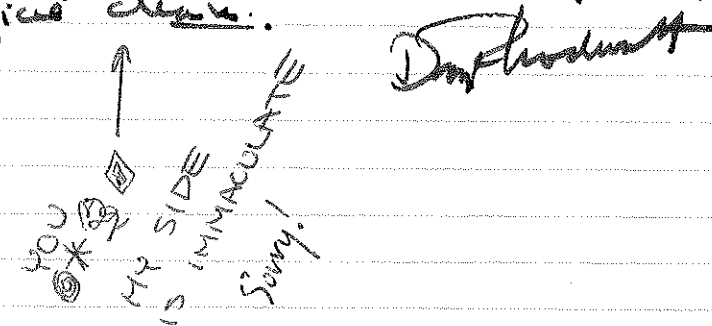
② 1090 on line @ 2145 hrs (w. Yahn) Holding occasionally for 1518 stays (common R-starts)

③ 4224 release in work by TPS (R. Dutton) started @ 2200 hrs leak check completed - Trouble on elect portion on 3rd shift (Bary + Swalla)

5018

④ Bill - big flap on LN₂ on 3rd shift - in say 43-020 (approx). On DR #44 with John Buv. running test LN₂ was vented over board, & tech was in way of vent burned arm. C/A was to repair tech plumb venting LN₂ out of Bldg. There is a caution note about this in OCP & in TVAR but no note on DR which was in progress, however T. Buchak was on site at vent when this occurred. Don't ask me why he at least didn't warn tech.

Gething giggled on housekeeping - please keep office clean.



Don Flodman

← BACK, BOTTOM.

3/14/68-HUBER

- 1. OCP 1518 IN SEQ. 44 (GOING SLOW)
- 2. OCP 1090 IN SEQ. 07, IN HOLD UNTIL
- OCP 1518 COMPLETES SEQ. 49, ^{WE ARE} SERVICED.
- 3. WEEKEND O.T. ENCLOSED.

✓ DON! ONLY ONE PROP. TYPE SHOWN ON 2ND & 3RD-SAT. & SUN. YOUR SHT. SHOWS 2. CONSIDERING COMPLETION OF PU VLV. & 4224 PROBS. WE ONLY USED 1.

I WROTE THE ^{SAT.} SAVALA/^{SUN.} BERG & ^{SAT.} DOTSON/^{SUN.} FINLEY NAMES IN WITHOUT REASON, PLEASE CHECK WITH THEM & ALTER SHEET AS REQD.

✓ WE NEED ALL P/C TYPES THIS WEEKEND.

3/14 - 3/15 Nights DMR

- ① Retest on 4224 in work @ seq 02-004 at 2400 hrs (Ray + Tom)
- ② 1518 - some minor holds due to 1090 @ seq 44-013 at 2400 hrs (Ellis C.)
- ③ 1090 - going well at seq 07-006 2330 hrs (W. Yahn)
- ④ Manny S. wanted both weekend days so ~~he~~ he'll work this weekend.

3/15/68-HUBER.

- 1. OCP 1518 IN SEQ. 46.
- 2. OCP 1090 HOLDING UNTIL 1518 COMPLETES SEQ. 49.

3/15 - 3/16 Nights DMR

- ① 1518 @ seq 47-020 2300 hrs Walt Y
- ② 1090 Holding seq 07-007
- ③ DR 18 (valve sign.) completed on 2nd (Ray + Tom)
- ④ 1518 must be done by 2400 hrs tomorrow night - per Olson
3/16

3/16/68-HUBER.

1. 1518 CONTINUING, MIGHT FINISH BY MIDNIGHT. WE HAVE NOT RUN SEQ. 41, WE WILL NOT RUN SEQ. 41, TVAR WRITTEN TO DELETE IT.
2. THERMOSWITCH TEST WILL NOT BE PERFORMED. ENGR. WILL RELEASE E.O. TO CANCEL ORIGINAL.
3. 1090 GOING INTO SEQ. 8 (COMPRESSIBILITY). SEQ. 7 NOT COMPLETED, GO BACK TO SEQ. 7 AFTER SEQ. 8.

3/16 - 3/17 Nights DMR

① 1518 @ seq 55-007 1830 hrs (Finley)

- ② 1090 running compressibility checks @ 1830 hrs (w. Yalam) completed + sampling (see note below)
- ③ Propulsion - no effort

④ 1518 completed except for power down of equipment removal @ 2130 hrs. Power down will be done + equip removal (not test) on 1090

⑤ 1518 completed (powered down TVAR'd out - pickup on 1090)

⑥ Report came thru @ 0400 hours that samples taken on all 3 loops failed. Particle count was extremely high (500-700) I'm not surprised. Samples were taken first in a white plastic cylinder then poured into the analysis bottles. Samples were also taken by reaching under the QD support to the top on the AH-343 - this could have ~~knocked~~ dirt into bottle. I don't think the vehicle system is dirty

J. Newman picking up on DR to circulate, top off, and resample. 1090 in hold at this point (were running thermocouple check). Note: On thermocouple check, what is needed is a faster responding recorder unit (DVM Brush Recorder etc)

Kludge by Murphy (heat gun) was completed @ 0400 hrs. Buckle running a test on this in the BME area - this might help, but recorder with faster response is definitely needed.

DMR

3-18-68

① 101 Powered down 1090 - awaiting gun cleaning, and hardware.

3/19/68-HUBER

~~1. WILL TAKE 1 SAMPLE FR. 1 F/C W/G LOOP ON EARLY 2ND SHIFT DO NOT TAKE SAMPLES FR. OTHER 2 LOOPS UNTIL 1ST SHIFT TOMORROW. REASON: WE CURRENTLY HAVE ONLY 1 CLEAR GRADUATE. WILL HAVE 2 MORE TOMORROW AM. ALSO, WE WANT BOB UY FROM~~

FORGET IT.

~~1. DON'T TAKE ANY SAMPLES FR. SK TONITE.~~

3/19/68 2nd Shift DMR

① Contamination (F/C) finally pinned down - turned out to be the A14-343.

Piston screw (stainless steel) in ~~barrel~~ traveling thru the stationary bearing screw (bronzal) removed ~~metal~~ metal (hard metal vs soft metal) from the stationary screw. This traveled up into the O-rings which act as piston seal. If you look ~~at~~ closely at the A14-343 you can see where the barrel is scored the entire length of piston travel. This may be a real problem unless you can prove to NASA that no fluid was displaced from the A14-343 into the vehicle.

3/20/68-HUBER

~~HUBER RIGHT~~

1. PLOT ON F/C W/G CONTAMIN:
A14-343 TEE RECLEANED. UNIT
~~RESERVA~~ RESERVICED. ALSO
NEW KLUGE BUILT. ^{USE} WHICHEVER
GETS A GOOD SAMPLE 1ST.

3/20/68 2nd DMR

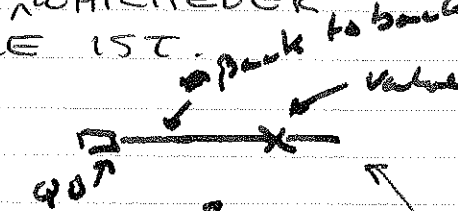
1. Took one sample from kluge ^{assembled} it failed.
Took 2 more samples both passed
Hold till morning to take vehicle samples.

DMR.

3/21/68-HUBER.

1. WEEKEND O.T. SHEET ENCLOSED.
PLEASE FILL IN NAMES IN
PENCIL.
2. 2nd & 3rd SAMPLES FR. KLUGE
GOOD.
TOOK SAMPLE FR. LOOP 1 → GOOD
TOOK " " LOOP 3 → BAD (JUST BARELY)
LOOP 2 Q.D. HANGS UP.
DON'T TAKE LOOP 2 SAMPLE - WE
WILL DO SO TOMORROW ON 1ST.
3. HAVE YAHN, NEWMAN &
BOCHAK WORK ON 1518 DR'S

WILL BE
ABLE TO
SELL →



3/21/68 DMR 2nd Shift

① Bill - Roshon wants to know status of DR 25 (OCP-1518) apparently this affects panel #2 which is currently being worked on. Be sure & get with him on status.

3/22/68 2nd Shift

By direction was on net for 5060 ZTU1 thru entire shift. W. Yelen working TPS for sampling. Other status unknown.

3/24/68 - HUBER

1. PWR. UP. 101 PROB. ON ZND.
2. OCP 1518 TPS 009 MUST BE IN WORK CONCURRENT WITH PWR. UP. READ VAC-10N C/O UNITS DURING PWR. UP.
3. W/G SAMPLE FR. LOOP 2 STILL MUST BE TAKEN (PROB. 1ST SHIFT TOMORROW).
4. PROPULSION RETEST INCLUDED ON ^{RETEST} TPS'S.
5. TVAR'S TO RETEST OCP 10A0 SEQ. 7 WRITTEN. REWUN SEQ. WHEN OPPORTUNITY EXISTS.

① D. NEWMAN FELL DOWN AND HURT HIMSELF.

3/25/68

- ① 1st shift notes?
- ② 101 had panel one problems - all systems in hold
W. Yelen worked on DR's and reset configuration
- ③ When is Paul M. coming to 2nd shift?

3/26/68 - HUBER

1. LEFT EARLY - DENTISTS APPTMT.
2. MASUMOTO ON 2ND NEXT MON.
HE WILL HAVE TO RETURN
TO 1ST FOR 3 COURSES IN
APRIL.
3. RETEST PERIOD WORK:
PROPULSION - TPS,
F/C - ¹COMPLETE 1090 SEQ. 7
2) RUN OCP GEN TPS 009
TO REVERIF. P426 & P147
PIUS.
3) VAC-VD CHECK COMPLETED.
4) ENGR (JIM NASH) SEZ
W/G LOOPS ARE O.K. AS IS.

3/27/68 - HUBER

- ← was off 1 day. DMR
1. 2ND & 3RD SHIFT NOTES?
 2. HAVE YAHN & NEWMAN RUN
OCP GEN TPS'S 8 & 9.
 3. PROP. TYPES TO CONTINUE TPS 008.

RETEST

2ND & 3RD SHIFT SCHEDULE STARTING
APR. 1st (midnight this Sun.):2NDPROP { FINLEY same
CORNWELL fr. 1stFCC { YAHN same
MASUMOTO fr. 1st3RDPROP { SAVALA same
BERG sameFCC { NEWMAN same
BUCHAK same

2nd Shift DMR 3/27/68

- ① W. Yahn working TPS 009 - many modes
written (valve box valves not opened)
2. Roy, Tom completed retest on propulsion
system. No glitches - 1 hour of work
Need more work for Prop. types

3/28/68 - HUBER

1. WEEKEND O.T. SHEET ENCLOSED.
PLEASE FILL OUT.
2. PLEASE HAVE YAHN, NEWMAN &
BUCHAK WORK ON DR'S. IF THEY
STOP ON OCP DR'S - HAVE THEM
WORK ON V375FC DR'S.

3-29-68

1. WEEK END O.T. FILLED IN PENCIL
2. S/C 103 RALLY HELD DURING 3RD SHIFT
3. CLEAN DESK INSPECTION HELD AND FAILED.

3-30-68 THIRD SHIFT

1. D. NEWMAN SOLD SEVERAL DR'S
ON 1090 - 2, 4, 5 AND 6.

1518 SOLD 31 AND 41

2. ACCUMULATION TP'S ON OCP'S
NEED TER MOD SHEETS TO CLEAR
THEM. TPS 009 BOUGHT OFF.

3. SEE NOTES ON RECAP.

D. NEWMAN DID GOOD WORK.

3/30/68-HUBER

1. PROP. - NO EFFORT EXCEPT OCP
REVIEW.

2. FIC - WORK 1518 DR'S. PORNIS
HAS LEFT WRITEUP IN
SYS. LOG ON WHAT REQ'D.

3/30/68 2nd shift DMR

① Yahn working DR's all night

② Rinsky reviewing 4226 (103)

3-31-68 BEAMAN

1. BUCHAK DIGGING UP SUB DR'S FOR DR/8
AND COPY OF TPS 10. POOP HE DUG
UP ON RED TAG ETC. WILL TAKE A
LITTLE PROSE TO SELL DR 18.

Jack

APRIL FOOL'S DAY

1. WHY DON'T YOU OTHER GUYS LEAVE SOME
NOTES.

2. 2TV-1 DE STACKED 1448 SUNDAY MARCH
31 1968.

3. SAVALLA CALLED IN SICK "GREEN APPLE
QUICK STEP!"

4. D. NEWMAN WENT HOME EARLY.

5. T. BUCHAK STANDING BACK FROM DR 18.

6. V. BERG HERE REVIEWING OCP'S AND
WRITING QUESTIONS TO DAY SHIFT,
V. BEAMAN.

4-1-68-HUBER

1. IT'S NICE THAT SOME PEOPLE ↑
HAVE TIME FOR LEVITY.

2. TENTATIVE VACATION SHEET
ENCLOSED. PLEASE HAVE
2ND & 3RD SHIFTERS FILL OUT
& RETURN TO ME.

3. WORK 1518 DR'S.

4. HAVE PROP. TYPES LOOK INTO
OIBI TEST PREP. REVIEW
SECT. I FOR TUAR'S.

4-2-68 BEAMAN.

1. V. BERG & SUPPORTING LEAK CHECK OF
2TV-1 QUAD.

2. M. SAVALLA CHECKING ON HOOK UP OIBI.

3. M. SAVALLA & NEWMAN LEFT A LITTLE EARLY.

4-2-68 - HUBER

1. BEAMAN - WHAT'S ALL THIS "EARLY" CRAP I KEEP READING IN YOUR NOTES. DO YOU HAVE SOME SORT OF VACATION EFFORT?
2. 0131 ASSIGNMENT SHEETS ENCLOSED.
3. JACK: SAVALA'S PERFORMANCE APPRAISAL SHEET ENCLOSED.

#

4/2/68

④ ~~that~~ Vacation sched. filled out for 2nd - passed along to 3rd (Savvas Desk) - note Yahn wants a week off in June - wife pregnant.

⑤ Walt + Paul found prob in H₂ vacuum pump bad connector. Thinks all connectors of this type should be R&R'd. Would you believe they found ~~the~~ prob. troubleshooting on a PRR. ~~Now~~ Now trying to get a legitimate sqk. This could possibly clear DR 18, 20, WASH 1 on 1518. Paul sold 2 DR's on 1518.

⑥ Tom + Steve reviewing C34-653 - much missing inform on this in 131 - for instance it is never hooked up. They pulled drops & are writing TUAR's on this unit.

Bill

⑦ Ron prints on qual sheets. Originals on your desk. Do you have any performance appraisal sheets for 2nd shift?

4-3-68 THIRD SHIFT J. BEAMAN

① HAD TALK WITH DULEY AND G. STEWART CONCERNING RESPONSIBILITY OF 2TV-1 S/M. WE ALL HAD UNDERSTANDING THAT M&TS WILL COVER THE ENGINEERING REQUIREMENTS FOR THE BEER CAN UNTIL DIRECTED OTHERWISE, WE WILL DEFER ANY STACK REQUESTS TO M&TS. WE WILL STILL KEEP TRACK OF WHAT IS GOING ON BUT WILL NOT PARTICIPATE.

AMEN!

② DR #18 STILL OPEN. TRUE STATEMENT!

4-3-68 - HUBER

1. WHAT 2? ~~DR 55 & 56~~
2. NO. BUT YOU CAN MAKE OUT THE 1ST SHIFT ONES FOR ME IF YOU'RE ALL THAT EAGER. **Forget it!**
3. DON: YOU'LL HAVE TO LOOK UP P&P REGS. ON YAHN'S LEAVE OF ABSENCE. NO PROBLEM TO MY KNOWLEDGE BUT YOU'LL NEED PROPER PAPER. **((in work) P&P AS)**
4. ENCLOSED FIND COPIES OF PROPULSION "NEW LOOK" (i.e., SPS VS. RCS BREAKDOWN & OCP ASSIGNMENTS FOR 103 & 104).
JACK: TALK TO ME ABOUT THIS.

4/3/68 2nd DMR

5. TPS 005 (0131) on unutilized work

6. Compressibility test for F/C - TPS being written by Paul M. Yahn not in tonight.

7. 1518 TUAR's req'd to correct data section (data limits don't agree with body of OCP). Put this off to 3rd shift since Paul was busy on them @ 6.

→ LEFT EARLY - DENTIST.

4/4/68 - HUBER

1. DON: RE. YOUR I.L. SHOWING 2ND SHIFT "LEAD ENGINEERS" IN PROP. & FCC AREAS. WE DON'T HAVE LEAD ENGINEERS ON 2ND & 3RD. LET'S NOT STIR UP THE TROOPS THIS WAY. IF YOU HAVE ANY QUESTIONS SEE HUTCH OR HAVE GARTH SEE HIM.
2. WEEKEND O.T. SHEET ENCLOSED. PENCIL.
3. DON & JACK: IF YOU WANT I WILL HAVE 1ST SHIFT TYPES FILL IN ON 2ND & 3RD THIS WEEKEND SO YOUR PEOPLE CAN HAVE A NITE OFF. IF YOU WANT THIS JUST WRITE "1ST SHIFTER" IN SPACE ON O.T. SHEET & I WILL HAVE SOMEONE THERE.
4. DON: NOTE MASUMOTO COMING TO 1ST NEXT TUE. FOR ACE COURSE ON 9, 10, 11, 12 & 15th. THEN BACK TO 2ND.
5. DON: PLEASE GIVE ENCLOSED TRAINING SCHEDULE SHEETS TO YAHN & MASUMOTO. THEY NEED THESE CLASSES FOR QUAL SHEETS.
6. DON: FINLEY'S PERF. APPRAISAL SHEET ENCLOSED.
7. WE MUST HAVE McCLINTOCK'S TPS TO C/O P/86 & P/87 PIN RETEST COMPLETED PRIOR TO PWR. OF. HE WILL ENTER "SCOOP" IN SYS. LOG.

JACK:
DITTO IF
YOUR
PLANNING
SIMILAR
I.L.

4/4/68 2nd Shift DMR

8 Overtime - 2nd Shift types immediately took advantage of your item #3. Need one prop & 2 F/c types from 1st shift for weekend overtime. See enclosure.

9 0131 had station call for Sect II about 1400 hrs then went back into and are still in ~~off~~ Sect I

10 Regarding item 1 page 30. We do have lead engineers on nights. Those will be the types I'll go to for inform, status of DR's on test etc. I want one man on each system who knows what's going on. Your day shift people should funnel information to these people - please make sure this happens we want a verbal turnaround not just notes in the log at shift change - I'll be watching this & will personally raise ~~the~~ hell if it doesn't happen.

11 W. Yahn gave standbnd for 103 - not sure which OCP he chose. will give another tomorrow. ~~Es~~ Cornwall will give one on 4:224.

12 Understand there is now a 2 hour turnover req'd for 131 at shift change.

13 ~~THAR O~~

(over)

4-6-68 THIRD SHIFT.

① BIG FLAP ON CABLE FOR PROPULSION SYSTEM. TER GROUP HAD SAID THE PROBLEM HAD GONE AWAY DURING DAY SHIFT, HOWEVER, IT WAS A TEST CONSTRAINT. TER BUNCH WOULDN'T WRITE TPS TO CHANGE THE CABLE SO MANNY WROTE ON.

4-5-68-HUBER

1. START RAISING HELL. WE DON'T HAVE LEAD ENGINEERS ON 2ND OR 3RD. DAY SHIFT DOESN'T RECOGNIZE YOUR LEAD ENGINEERS & WILL CHANNEL INFO. AS NORMAL.

4-5-68

1. MFG. & M&TS IS FLAT ON PREPPING 2TU1 RCS & SPS FOR SHIPMENT. WE HAVE BEEN DIRECTED (OSBORN) TO SUPPLY PAPER & PEOPLE TO DO JOB. WE MAY OR MAY NOT NEED ^{TO RUN} A TPS TO PRESSURIZE QUADS - DEPENDS ON WHETHER OR NOT AN E.O. IS WRITTEN SAYING PRESENT BLANKET PRESSURES (i.e., 5 PSI ON H₂ SIDES & 25 PSI ON PROPELLANT SIDES) O.K. FOR SHIPMENT. WE ARE PRESUMING A TPS IS REQUIRED & MANHA/RIVERA ARE PREPARING IT.

A TPS IS NEEDED TO PRES. SPS TKS. FOR SHIPMENT.

THE QUAD TPS (IF RUN) WILL BE PERFORMED IN THE NORTH AIR LOCK. THE SPS TPS WILL BE DONE IN 2A0 WHEN SIM MOVED FR. NORTH TO SOUTH AIR LOCK.

THE FOLLOWING PROP. TYPES HAVE BEEN ASSIGNED TO THESE TPS'S.

	RCS	1st shift	SPS
FRI			MANHA & RIVERA
		2nd "	none
		3rd "	NEWMAN
SAT		1st "	MANHA
		2nd "	RIVERA
		3rd "	NEWMAN
SUN if req'd. will be same as SAT.			

3. DON: I MISLED YOU ON MY OFFER TO FILL IN W. 1ST SHIFTERS OVER WEEKEND. I DIDN'T WRITE NOTE PROPERLY. I MEANT PROPULSION TYPES ONLY. SORRY 'BOUT THAT. SUGGEST WE DELETE FCC 2nd & 3rd shift COVERAGE THIS WEEKEND AS WE CAN'T DO ANYTHING WITH OIB1 RUNNING ANYWAY.

Valm & Paul notified last night (4/4) that they wouldn't need to work.

except.

4/5/68 2nd Shift

- ① 2 DR's picked up by prop in 0131 - to do with bladder pressures - need words - don't think any verb is req'd.
- ② P/L running TPS009 but grease gun still being cleaned @ 0100 hrs. - don't think they will finish by seq 12. In seq 10 @ 0100 hrs.

3RD SHIFT

① UNABLE TO PROCEED ON TPS 009 BECAUSE OF GREASE GUN PROBLEM. PROBABLY WON'T BE READY UNTIL MONDAY. TPS WAS PUT IN OCP 0131 BOOK IN CONTROL ROOM.

② DR'S PROP. 0131 ONE TROUBLE SHOT AND @ 16 sold 19 open on XPULLER READS 8 PSIA AT AMBIENT.

③ TPS'S FOR 2TV-1 IN HOLD
~~to sold 19 open RCS. engineering.~~
 FOR ED. AND SIGNATURES. BEER CAN IS STILL IN AIR LOCK.

4/6/68 2nd Shift DMR

SPS
 ① ~~Prop~~ working on DR 29 - bad GSE vsg (PR11) venting all the time couldn't repair - being replaced.

② Regarding 731EP course you have with set up for. The training sched. I have on these courses reflect any shifts only for 4/11, 12 & 2nd shift 13-14. Please check.
Forgot it - had wrong (old) schedule.

③ 0131 in seq 013 @ 1947 hours. In ~~2~~ SES + G & N hold.

④ 103 transfer might be tomorrow - this ~~is~~ Per Schwanke. not definite though.

⑤ Problem now further defined looks like SPO601 GN₂ pre-value bottle source transducer is bad. Will have to wait to T/S further.
 With 700 # on gage CRT indicates 400 #

4-7-68. THIRD

① TPS 122 COMPLETED ON 2TV-1 NEEDED MOD TO HOIST AND ROTATE TO GET AT QD INTERFACES.

② NEED SPS DAY SHIFTERS TO COME IN ON TIME FOR 0131 (BETWEEN 0700 AND 0930 AM). WILL HAVE THIRD IN BETWEEN 1200 AND 1230.

(OVER)

- ③ BELIEVE THERE IS A F.C. W/B
SOLDER UNION ~~LEAK~~ THAT HAD TO BE
RE-HEATED. MAY NEED LEAK CHECK
NO INFO YET.

4/7/68 DMR 2nd Shift

- ① 0131 stopped @ end of seq 016 @ about
1930 hrs - went into an ACE hold - had
to change computer rooms. Expect to be
back in test @ 2400 hrs.

No Prop. problem
NO P/C activity

Bill - regarding contamination prob on 101 P.C.
suggest going route ECS did on sampling after
they ran into same prob.

They wiped down surrounding area then
held facility vacuum hose very close to sample
bottle & passed after failing 3 in a row.
Believe prob to be activity above 4th level
(ECS samples taken on 4th level on opp side
of s/m from P/C area). I'm going to get
Walt to try this approach the next time.

4-8-68 THIRD SHIFT

- ① D. N. WORKING ON STAN BOARD
② SAVALA BERG SUPPORTING 101-0131.
③ BACHAK REVIEWING ~~OP~~

4/8/68 DMR 2nd Shift

- ① Several errors in ~~130~~ 0131 (switch of C/B
not closed) caused some prop. problems
In seq 022 @ shift turnover (1600 hrs)
" " 023-023 @ 2400 hrs

- ② Bill - I won't be in tomorrow night - please
make sure everyone is on board.

4-9-68 THIRD SHIFT

- ① D. NEWMAN GAVE TELLS STAN BOARD
PART I CRYOGENIC SUB SYSTEM.
FUNCTIONAL DESCRIPTION, COMPONENT DESCRIPTION,
DATA, CONTROLS, DISPLAYS & ACCESS POINTS

- ② I WILL TAKE OFF TONIGHT TO MAKE OUT
MY INCOME TAX. SAVALA & NEWMAN HAVE
THE WORD.

- ③ 101 GOING MIGHTY SLOW SEQ 24 ~~~

- ④ I HAVE COMPLETED PERF. APP. NEWMAN,
BERG, SAVALA, BACHAK. I WILL
PROBABLY DISCUSS THEM WITH ALL
BEFORE THE WEEK IS OUT. GOING HOME.

4/10/68-HUBER

1. OIB1 complete thru seq. 28
2. Most have resolution on DR[#] 29 (SPS GN2 "B" pres. xducer shift) prior to going into seq. 30 (Entry).
3. No PIC activity.

4/10/68 DMR 2nd Shift

④ Completed 28. Into seq 030 @ abt 2200 hrs

⑤ W. Kahn working TPS 009 - with all the mod sheets. Got no. for us trying to get pumps turned on - couldn't get permission to get them on.

Bill ⑥ Well asked if he could rotate with day shift to see his family - what do you think - things are fairly slow. He would be better on days at this time reviewing OCP6 etc.

⑦ DR 29 - words put on this by Steve & presented to NTD. He looked it over but wouldn't sign. Didn't hold up going into seq 030.

4-11-68 THIRD SHIFT BEAMAN

- ① D NEWMAN Sick.
- ② TPS 009 IN HOLD ALL NIGHT SEQ 030.
- ③ 101 MANY PROBLEMS WITH POWER SUPPLY CIRCUIT INTERRUPTORS.

4-11-68-HUBER

1. WEEKEND WORK. WE ARE CURRENTLY SCHEDULED TO WORK SAT. & SUN. ON OCP OIB1-SC101. SUN. QUITE POSSIBLY WILL BE TURNED OFF BUT WON'T KNOW UNTIL TOMORROW OR SAT.

REQMTS. - 2 PROP. TYPES PER SHIFT SAT. & SUN.

NO FCC TYPES REQ'D.

NO ONE ON 1ST WANTED TO WORK THIS WEEKEND. SO I DREW LOTS TO FILL 1ST ON BOTH DAYS & 1 SLOT ON 2ND & 1 ON 3RD EA. DAY. THIS SEEMED THE FAIREST WAY.

AS SHOWN ON ENCLOSED SCHED.

WE MUST FILL 1 SLOT SAT. & 1 SUN. (2ND & 3RD SHIFT) FROM YOUR PEOPLE. PLEASE SELECT YOUR PEOPLE & FILL NAMES IN OPEN SLOTS.

IF ANY OF YOUR PEOPLE WANT TO WORK MORE THAN 1 DAY THEN CROSS OUT ONE OF MY ~~1ST~~ TYPES & WRITE THE VOLUNTEER IN.

JACK: NEWMAN HAS ENOUGH PROP. EXPERIENCE TO HACK OIB1. IF HE WANTS TO WORK HE COULD FILL IN FOR ONE OF YOUR PROP. TYPES (OR 1 OF MINE) ON 3RD.

2. DON: ~~WE~~ WE STILL HAVE TO COMPLETE FCC TPS 009. & WE REALLY HAVE 3 SK (2T01, 101 & 103). THAT REQUIRE GENERAL COVERAGE. SUGGEST YAHN STAY ON 2ND UNTIL MASUMOTO RETURNS. YOU CAN THEN

SEND WALT BACK TO 1ST.

4/11/68 2nd Shift

- ① Letter came through from Olsen on removing 101 SPS engine & replacing with 104 engine. Instrumentation will be stripped off 101 engine & put on 104.

Engine removal in work @ 2330 hrs

- ② For weekend o/t people see work sheet.

- ③ Most of night on 0131 was spent 7/5 on DR 38 - electrical glitches.

- ④ Yahn worked mod sheet for TPS 009 thru step 11. Awaiting reconnection of flex hoses QV's etc. prior to compressibility check.

- ⑤ Yahn concurred on your item # 2, Pg 39

BRD 4-12-68

- ① TPS 009 in HOLD STEP 11 OF MOD COMPLETE.

- ② SAVALA BERG WANTED TO WORK WEEKEND. THEY ARE ALSO AWARE THAT WE MAY NOT WORK SUNDAY. ~~WE~~ WE SHOULD KNOW BY TONIGHT IF SUNDAY IS REQUIRED

- ③ COMPLETED ~~PA~~ P.A. INTERVIEWS NEWMAN, BERG, SAVALA, BUCHAK.

- ④ Will Prop types be required during engine change, what will retest requirements be? #

4/12/68-HUBER

1. SPS ENGINE CHANGE RETEST REQMTS. PER J. P. HEALEY, SPS ENG. RETEST WILL BE ACCOMPLISHED BY:

1. RUNNING OCP 0131 PLUGS OUT.
2. RUNNING OCP ~~7474~~ ⁴⁰⁷⁴ ~~XXXXXXXXXX~~ IN B/260.
3. CONTINUITY CHECKING 35 SPS INTERFACE WIRES IN DOWNEY. ~~XXXXXXXXXX~~ 3 ⁵ WIRES YET TO BE DEFINED BY ENGR. THIS CHECK WILL BE RUN IN DOWNEY ~~XXXXXXXXXX~~ AFTER PLUGS OUT.

2. SPS CHECK VALUE CHANGE RETEST WILL BE ACCOMPLISHED IN B/260 DURING OCP 4074.

3. TENTATIVE P&W F/C COURSES (EAST HARTFORD, CONN.) SCHEDULED FOR WKS. OF 5 MAY & 19 MAY. AS SOON AS DATES ARE FIRM I WILL GET YAHN, MASUMOTO & NEWMAN SCHEDULED.

4. WEEKEND WORK STATUS:

SPS ENG. INSTALLATION EXPECTED TO BE COMPLETE SUNDAY MIDNIGHT. PLOT MAY BE TO PUR. UP PRIOR TO THIS SO THAT EVERYTHING IS READY TO GO WHEN INSTL. COMPLETE. IN ANY EVENT WE ONLY NEED 1 PROP. TYPE / SHIFT GEN'L COVERAGE TO FOLLOW / ASSIST ENGINE INSTL. / CHECK ULV. R&R.

~~TRAC~~ ^{DON} I HAVE CANCELLED 1ST SHIFT TYPES FOR SAT. & SUN. 2ND SHIFT.

Right!

4/12/68 2nd Shift DMR

① Enclosed is sched for SPS eng on 103

Bill

② Found Masamoto's time card on your desk. completely blank. Called him found out what he did last week - filled it out & turned it in.

③ 101 engine work still in progress.

④ Will listening to tape - trying to sell vac-ion pump = DR.

4/13/68 - HUBER

1. HULLOCK SHOULD HAVE TPS COMPLETED BY END OF 1ST SHIFT TO REVERIFY RCS PORTION OF RCS CONTROL BOX.

2. ^{TP}ENGINE INSTL. PROCEEDING SLOWLY. WE MIGHT NEED A TPS TO ALIGN IT (NO DECISION YET). CORNWELL EXPERT IN THIS.

4/13/68 2nd DMR

① Regarding item 2 (4/13) and there has an old TPS which was never issued that should do job. Run copy & put it into system log.

② Bill - scrounged an old 2 drawer ~~with~~ file with lock - do you want to shave it - let me know so I can leave combination.

③ Engine alignment (101) - In meeting with Thurman Stone, myself, Medina went over alignment prob. Medina apparently said that all we needed to do was to swap engines. Cornwall, Thurman concurred in that nulling of actuators was a must & that vert. alignment (S/M + engine) ~~was~~ could be done but wasn't req'd since nothing has changed since original alignment work (Dec 20 per Cornwall's log). Medina decided to go ahead with ~~the~~ both steps. Vert alignment set for tomorrow @ 0800 hrs. Nulling actuators is called out per spec in FAIR ticket. Earthquake made vert alignment decision feasible.

④ TVAR 04463 to vacabiqua SPS/RCS after dielectric hose installation

5. Rough draft of TPS to retest 101 after R/R of control box given to Steve.

4-15-68 THIRD SHIFT BERMAN

① SPS ENGINE STILL IN WORK ON 101. M. SMYTH SAID IT LOOKED LIKE SOME TIME TONIGHT.

② 2TV-1 ON TRAILER DEPARTURE 0900.

③ VACATION 16 THRU 19 TH C. LEISBERG WILL STAND IN FOR ME. VACK.

4-15-68 HUBER

- 1. LEFT EARLY - DENTIST.
- 2. DOTSON WRITING FCSM RETEST TPS. CORNWELL SHOULD PICK THIS UP.
- 3. ENGINE INSTL. PROCEEDING (slowly).

4-15-68 2nd DMR

④ Yahn sent up by Casson to continue review on 1518 for 10³s. No engineering suppt. - no NASA. Is it true they plan on running this Wednesday?
 Can you set Yahn up for P&W course on May 5th?

⑤ The number is 28,14,45,0

⑥ TVAR 04483 (reconnection on hoses) in work on 2nd

⑦ TPS issued on RCS control box rework

⑧ Mylar wrap in work on 101 engine. - Word has it that engine will be hung in about 4 hrs (0400).

⑨ Forwarded inputs for group ladder to Duley - he will give to you. - Hutch was under the misunderstanding that I concurred on ladder as written

4-16-68 3rd. SHIFT

AT THE PRESENT TIME SPACECRAFT 103 IS IN A HOLD CONDITION DUE TO LIGHTS OUT OF SEQUENCE IN OCP 1115 SEQ. 03-169. J. L. Leiby

4/16/68 - HUBER

1. DON: PAUL MASUMOTO'S SECURITY I.D. ENCLOSED. HE WILL NEED THIS TO HAVE HIS PHOTO TAKEN FOR NEW BADGE. HE MISSED PHOTO ON DAZE.

2. I'VE HEARD THAT TOO. CONSIDERING CURRENT TEST STATUS (?) & AVAILABILITY OF OCP HARD COPIES I WOULD PICK A START DATE AT LEAST A WEEK AWAY.

3. I PLAN TO SCHEDULE YAHN, MASUMOTO & NEUMAN FOR THIS CLASS AS SOON AS DATE IS FIRM. I WOULD SHIFT A 1ST SHIFT FCC TYPE TO 2ND FOR THE WEEK THEY ARE AWAY.

4. WHAT A BUILD! HAVE HER WORK ON THOSE HIPS THOUGH.

5. SPS HE CHECK VALVE MUST BE REWELDED.

6. SO WAS I. YOU NEVER GAVE ME ANY COMMENTS.

7. WE HAVE 3 RETEST ITEMS TO BE RUN AFTER PLUG-OUT PUR. UP BUT BEFORE MISSION.

- a. TPS RCS CONTROL BOX (McClintock)
- b. TPS SPS FCSM REVERIF. - CONTINUITY & RESISTANCE CHECKS (RIVERA).
- c. TPS ODA TO RUN PIC W/G COMPRESSIBILITY TESTS & TAKE SAMPLES.

CAN BE DONE BEFORE PLUG-OUT.

4/16/68 2nd DMR

- ① TPS being done by Steve to ~~assist~~ perform engine alignment - Spec called out in FAIR ticket N.B.
- ② Yahn giving Stambboard on 1518(103)
- ③ 0131 in protot - 10060

4/17/68 - HUBER

1. SK 101 POWERING UP.
2. SHOULD GET INTO OUR F/C W/G (TPS OR) & PROP. (TPS ORS) RETESTS TONITE.

4/17/68 2nd DMR

1. RCS control Dax TPS in work most of night - got into it but no ACE response from engine sensors. Went into DR - resolved prob by blocking sensor ports. Press 6/30 P316 called out in TPS too low to trip flow sensors (flow verified, but no lights). Went to 40 P316 - all ok. Closing out paper at 2300 hrs.
2. Some activity on 103. ✓ valve replacement - Steve helped.
3. Compressibility checked on 2 loops @ 2300 hrs. Grease gun QD started ~~to~~ to leak. Wuld trying to complete compressibility with leaking QD.

F.

4/18/68 - HUBER.

1. I LEFT A NASTY NOTE IN F/C ^{SYS.} LOG FOR 101, INDICATING DISSATISFACTION ON TURNOVER NOTES. TELL THOSE CHARACTERS TO KEEP US INFORMED.
2. ZTU-1 STICKERS & LETTER ENCLOSED FOR 2ND & 3RD SHIFTERS.

4/18/68 2nd DMR

- ③ O/T list shows req't for 3 prop men each day - sched both Tom & Steve both days but we're still one short on Saturday. You'll get Shim on Sunday.

- ④ Yahn + Paul - got good sample on ~~loop~~ ^{grease gun}. Ready to hook up to obtain ullage ^{+ sample} & discovered S/C QD dirty to eye. Vacuumed QD - corrected situation. Ready to sample @ 2330 hrs but vehicle lost ACI Buss. Awaiting ^{ACI} power up to continue.

- ⑤ 131 in SCS problems - were in TPS 15 & DR 38 all this shift.

4-19-68 3rd SHIFT A.C. LEISBERG

THE F/C 3 LOOP CONTAMINATION CONTROL SAMPLE ANALYSIS REP # MEA97009 WAS ACCOMPLISHED AS FOLLOWS.

50/100 μ	100/195 μ	195+ μ
100 ALLOWABLE	10 ALLOWABLE	0 ALLOWABLE
69 ACTUAL	14 ACTUAL	4 ACTUAL

SEE SYSTEM LOG BOOK FOR MORE INFORMATION ON THIS ITEM.

4/19/68 2nd Shift

① Steve worked most of night on TPS to assist in running of FAIR TICKET for check valve replacement (S/C103). TPS needed because purging & prior to millipore sampling not adequately described in FAIR TICKET. The ticket is lousy - we've got to do something here. Mentioned this problem to both Jones & Casson - we've been hit the last several nights to support in adequate FAIR TICKETS (engine design etc) see what you can do on days.

No other activity

4-20-68 3rd Shift A.C. LEISBERG

S/C101 AFTER CHECKING WITH THE ETC ON S/C101 AND FOUND OUT THAT THEY WOULD BE DOWN FOR ABOUT FIFTEEN MORE HOURS, DUE TO THE THUMBWHEEL PROBLEMS ON PANEL 6 AND 10.

S/C103 THE PRESENT PLAN IS STILL POWER ^{DOWN} ON THE DAY SHIFT AND POWER BACK UP SUNDAY NIGHT.

① 4/20/68 DMR 2nd

① RCS in barrel all night. Picked up DR 130 @ seq 039-003 and have been T/S all night. DR was because S/M 16 & 2C TB are grey S/D Barberpole. Trouble believed to be in com ~~on~~ unbricked connector. Not definitely pinned down @ 2400 hrs.

② Yahn was working 1090 shutdown - had GSE relief valve probs on GSE. Not sure if they completed 1090.

4-21-68 3rd Shift A.C. LEISBERG

01:30 SPACECRAFT 101 HAS COOLANT BACK ON THE LINE, BUT AT THE PRESENT TIME WE ARE IN AN RCS HOLD. THE PROBLEM IS WHEN THEY ARE MONITORING THE RESISTANCE BETWEEN S-16 PIN 50 & PIN 54 AND WHILE OPENING DOOR C APPROX. ONE INCH THEY ARE GETTING AN INCREASE IN RESISTANCE OF 15%. THEY ARE STILL TROUBLESHOOTING THIS PROBLEM.

07:00 THEY FOUND THE PROBLEM FROM J190 TO J16 WIRE HARNESS WERE DAMAGED FROM RUBBING AGAINST QUAD DOOR WHEN OPENING AND CLOSING.

4/21/68 DMR 2nd

① DR 130 reworking completed @ 2400 hours - cleaning paper & will go back into OCP @ seq 039-001.

4-22-68 ^{COMPLETED} Dranner 101 ~~to~~ SEQ 044 0131 TRYING TO START ~~up~~ UP IN TEST AGAIN.

I WAS HERE AT 7:50

① I WAITED UNTIL 10:00 AM. TO SEE YOU THEN I WENT HOME Jack.

4/22/68-HUBER

1. 0131-101 VERY SLOW, HUNG UP IN PAD ABOUT SEQ.
2. OCP 1518-103 AT LEAST 2 DAYS OFF.
OCP 4225-103 PROBABLY WK. OFF.
3. YAHN, MASUMOTO, NEUMAN & FARR SCHEDULED FOR P&W FIC COURSE WK. OF 5 MAY.

4-23-68

1. 0131-101 SEQ 048 SOME HOLDING IN QAM TROUBLE SHOOTING, J. Beaman.

4/23/68 2nd DMR

- ① 101 Seq 48, T/S DR 141 G&N @ shift turnover.
- ② Steve C. is on a scheduled 53 hours - per timecard - why? Because that is all the time he needs.
- ③ 101 started back in test again @ approx 2200 hrs - had minor problem with RCS Jet Drivers - turned out to be mispositioned switch.
No DR written
- ④ Yahn going over OCP-1518 in prep for start tomorrow.

Read I.L. posted in upper at hand corner of my Bulletin board. Hales

4/24/68-HUBER

1. WALT YAHN WILL NOT BE IN TONITE.
2. OCP 1518-103 LUCKY TO START TOMORROW.
3. HUTCH REQUESTED 2ND & 3RD SHIFT SUPPOS. MONITOR OPEN DR'S TONITE SO THAT WE CAN STAND UP TOMORROW AM. (WHEN OBI COMPLETE) & ITEMIZE ALL RETEST REQMTS.

4/24/68

① 131 morning good - in seq 60 @ 2200 hrs.

Had Tom check all DR's for retest - he said there are no DR's on SPS, RCS primarily - there are one or two instrumentation types that RCS/SPS might have to assist in such as the SP001 noise problem etc.

No new DR's were picked up on 2nd in the RCS/SPS world.

(103)

② 1518 pretest about 50% done but did not have full support all night (this shift) due to 1115 + 5049. Would advise starting to run pretest from control room tomorrow.

③ Regarding Steve - can understand hours per 42B but don't understand why he was put on these hours - just curious.

4-25-68 THIRD SHIFT

① 1518 SECTION I IN WORK.

② ECS & CRYO NEEDS SOME COORDINATION TO FIT CHECK O₂ UMBILICAL LINES. DOES S/C POWER HAVE TO BE ON?

4/25/68 - HUBER.

1. OCP 4020-S/C101 WILL PROBABLY BE DEFERRED UNTIL TOMORROW DUE TO POSSIBLE CONFLICT WITH RETEST.
2. OCP 1518-SC103 PRE-TEST MTG. SCHEDULED FOR 4:30 PM TODAY. OPS. TYPES EXPECT TO GET INTO OCP TONITE.
3. E.O. 664075 SHOULD BE RELEASED BY 2ND SHIFT. IT LOOSENS UP. PIC W/G PARTICLE TOLERANCES & WILL SELL DR'S 7 (OCP 1090) & 113, 120 & 121 (OCP 031). HAVE FCC TYPES GET A COPY & GET CIA'S ON THESE 4 DR'S.
4. GEO. DORNIS HAS WRITTEN A TPS (NO # YET) TO REMOVE & REPLACE CRYO, O₂ BLANKET PRES. TO PERMIT FIT CHECKING OF O₂ UMBILICAL LINES PER OCP 5056 TVAR. SEE IF YOU CAN GET THIS TASK DONE TONITE.
5. INSTRUCT 2ND & 3RD SHIFTERS TO COMPLY WITH ENCLOSED DR LOG BK. INSTRUCTIONS. LOG BOOKS ON LEAD ENGRS. DESKS.
6. FILL OUT O.T. SHEET.

4-26-68

1. ~~MR~~ MR BERG STATED THAT HE WOULD WORK SUNDAY IF NECESSARY AND DOES NOT CARE FOR A DAY SHIFT FILL IN.

2. OCP 1518 TRYING TO GET STARTED. TRYING TO GET SECTION I SOLD IN CONTROL ROOM. TPS TO RUN SECTION II WRITTEN UP - NOT SURE IT WAS RELEASED OR SIGNED.

4/26/68 - HUBER

1. OCP 1518-SC103 PRETEST STILL LOAFING. START TONITE!
2. HAVE PROP. TYPES WORK OCP 4020-SC101 PRETEST (URGENT).

4/26/68 2nd DMR

③ 1518 started seg 01 @ approx 1900hrs. Please note - 2nd shift will stop & T/S all DR's no skipping.

Things went smoothly up to Seg 06-008 - STC was informed that the SCAT 049 was being removed from stack. Found out that CTC (Biondo/Wilkens) had given TEP permission to remove SCAT 049. 1518 went ~~to~~ into hold at this point when apparently they could have run to Seg 10 without rework of SCAT 049.

④ 1518 powered up & back in test @ 2400hrs

⑤ 4020 being pushed by ~~Stu~~/Tom he got quite a few TVAR's thru CEE etc. There is very little left to be done on pretest.

Regarding

(101)

6. ~~Get~~ ~~twx~~ from Florida regarding SPS heater check. This was brought up tonight but no work done on 2nd. Understand Harrison knows about it will write TPS for this
7. Will not be in tomorrow - please make sure Steve gets good turnover. Be in Sunday

4-27-68 THIRD SHIFT

- ① AT 0147 PROBLEM WITH V31 CONNECTOR. TER DEMATED AND REMATED HOT CONNECTOR. ARCING WAS EXPERIENCED AND BIG INVESTIGATION TOOK PLACE. ~~THE~~ S/C 103 POWERED DOWN TO TAKE CARE OF PROBLEM.

- ② ~~TPS~~ 103 ALSO HAD ^{SPS} LIGHTS THAT CAN NOT BE EXPLAINED. YOU WERE CALLED EARLIER ON THIS.

- ③ TPS FOR ~~THE~~ SPS HEATERS WAS REQUESTED. V. BERG TRIED TO WORK ON IT BUT HAD A LITTLE DIFFICULTY BECAUSE HE DID NOT HAVE ALL THE INFO.

4-28-68

- ① TPS FOR SPS HEATERS COMPLETED
- ② OCP 4020 VERY SLOW GLITCHES.
J. O'Connell.

4/28/68 2nd

- ① 4020 shift turnover @ 01-013. Ran well until QD leak checks - say 01-044. Found TP9, TP10 leaking. Proceeding on to other 2 Test ports @ 2400 hrs. This may require replacements.

DMR

2. NO P/C activity

DMR

- ① 4020 SAVANA PROCEEDING. MASS SPEC CRAPPED @ QD. TOOK ONE FROM 103. HAD TO CALIBRATE. SHOULD BE GOING AGAIN ABOUT 0645.

- ② 0630 103 - 1518 Early SEQ 10 IN HOLD ~~ON~~ PROBLEM OF SWITCH I.D. OF SCAT 49.

4/29/68 2nd Shift

- ① 1518 ~~at~~ seq 16-005 ~~at~~ at turnover. Ran into real glitch at seq ~~016-009~~ 016-009 - could not get voltage to signal condition. Had to write TVAPZ after troubleshooting to power down, make conn., power up per seq 022 - Bud OCP error. Doing all the above cost about 5 hours. Ready

- ② ~~4225 in section I protest~~ ^{5/6/68} to go @ about 2300 hrs then were dumped due to priority for 1115.

- ③ 4225 in Section I - monitored by Fairley

- ④ DR#2 4020 sold

- ⑤ Nulling of SPS anyone 103 in work - Steve ~~at~~ / Tom helped

Bill →

- ⑥ ~~Will complete test~~ 4020 in SA - what's the reason for TPS's rather than using DR's for vels in this OCP?

4/30/68 2nd shift DMR

① TPS being cranked out to run 2 flex lines from 2nd level (ports A & C) stand 2A to sta 5A. Penny done by TER people (TPS + work)

② Harvey reviewing TPS cranked out by Walt R. to retest on 4020 @ sta 5A

Bill → ③ Please answer questions item #5 on 4/29 why TPS? when work could be done easier on DR's. Plus we don't need NASA review on DR's till after their done. Mod sheets etc on TPS will cost us time.

④ TPS for Fuel Cell Sim install + C/O₁ being typed this shift. (103)

4-1-68

① PREP FOR 4225 ~~#~~ IS NOT BEING WORKED THIS SHIFT. TOO MUCH OTHER EFFORT.

② 4020 TPS TO RIG 5A IN WORK BUT ONLY ONE LINE RIGGED NEED ANOTHER AND BLOW DOWN. ONE TK HAD TO GO OUT TO CLEANING. DOESN'T LOOK LIKE IT WILL BE READY UNTIL FIRST SHIFT.

③ 1518 IN HOLD WAITING FOR 1113 @ 04:30.

④ M SAVALA HURT LEG SLIDING INTO SECOND BASE.

⑤ 1115 FINISHED @ 0650.

J. Beaman

5/1/68 - HUBER

1. OUR HOME PHONE LIST CURRENTLY IS MISSING THE FOLLOWING. PLEASE PROVIDE:

	NO	AREA CODE
2nd D. RHODEWALT	430-7026	213
3rd J. BEAMAN	842-4250	714
1st K. AMES	828 -6396	714
1st H. SHIMIZU	<u>962-8098</u>	
2nd P. MASUMOTO	842-2588	714
2nd W. YAHN.	421-1640	213

2. DON. 4/30 NOTE 3 & 4/29 NOTES. TPS VS. DR ON OCP 4020 RETEST. AMES, RIVERA & HARRISON DECIDED TPS WAS PREFERABLE.

3. TO PERMIT THE USE OF RCS (RATHER THAN SPS) ENGRS. ON OCP 4225, I WILL HAVE RIVERA ON 2ND & SHIMIZU ON 3RD STARTING TOMORROW NITE. CORNWELL & SAVALA (SPS TYPES) SHOULD HAVE THEIR HANDS FULL WITH 103 SPS ENGINE INSTALLATION.

4. TO FILL IN FOR YAHN/MASUMOTO/NEWMAN WHILE THEY ARE ON P&W BOONDOGGLE, MURPHY WILL BE ON ~~2ND~~ ^{2ND} & DORNIS ON ~~2ND~~ ^{3RD} STARTING SATURDAY.

5/1/68 2nd Shift DMR

101 → (1) 4020 TPS - Cornwell working. Still configuring for test. CSF hose blowdown completed @ 1900 hrs

103 → (2) Finley - working TPS for SPS heater c/o. TPS released & should be complete by 2400 hrs. Also working preheat etc on ~~4225~~ 4225. TB written to do work which was not clear on FAIR ticket.

(3) F/c started @ seq 19-031 in seq 26 @ 2300 hrs. Picked up 2 DR's as follows
 (a) SCATO 49 cable not hooked up Sold
 (b) F/c Meter not working - CRT OK still open
 this may mean removal on panel #6.
 In seq 29 @ 2400 hrs

J. Rhoades

5-2-68

101 - MANY PROBLEMS

(1) ~~V. BERG FOUND 800 PSIG HE IN ONE TANK WHEN TRYING TO BRING PRESSURE DOWN.~~

(2) HE TRIED TO STOP MANUFACTURING FROM PUTTING HEAT SHIELD UP UNTIL HE COULD SAFE HIS SYSTEM. HE WAS AFRAID OF TECHS BUMPING LINES AND BREAKING QD'S. HE HAD TO GO TO MEDINA TO GET HEAT SHIELD PEOPLE TO STOP UNTIL HE COULD SAFE THE SYSTEM.

(3) 4225 FINISHING SECTION 1 SHOULD GET STARTED SOON.

(4) 1518 IN SEQ 36 THEY HAD CONNECTOR CLOCKING PROBLEMS. TER IS FIXING.

(5) D. NEWMAN NEEDS INFO ON TRAVEL.

5/2/68 - HUBER

1. WEEKEND O.T. SHEET POSTED ON SIGNOUT BOARD. SINCE REQMTS. EQUALLED THE NO. OF PEOPLE YOU HAVE I FILLED OUT ALL THE NAMES. NO ACTIVITIES SCHEDULED FOR SUNDAY.

2. DON. TELL CORNWELL 1 MORE WEEK. I'LL HAVE A REPLACEMENT FOR HIM ON 5/13.

5/2/68 2nd DMR

1. 4225 finally got started seq 01-002 at approx 2300 hrs.

(2) 1518 got started at about same time - in seq 40
 (Both above held for OCP-8:00 comm checks.)

(3) What about shift rotation @ June 1st?

(4) 4020 work held because of heat shield work being done.

5-3-68 3RD SHIFT

(1) MR. BEYGEN WAS IN AT MIDNIGHT AND SAID HE WANTED SIX OCP'S ON THE LINE AT 0200 THIS AM.

(2) 1518 CONFIGURING FOR SEQ 45 AT 0630

(3) 4225 RUNNING PRETTY GOOD BUT DELAYED PERIODICALLY WHILE STARTING CMT ETC.

(4) I WILL BE OFF BOTH SAT & SUN. SAVANA WILL MOTHER RCS AND PORNIS CAN KEEP 1518 GOING.

5/3/68-HUBER

1. DON: FINLEY CALLED IN - WILL NOT BE IN TONITE.
2. OCP 1518 MOVING SLOWLY. NOW SITTING AT START OF SEQ. 45 WITH GSE PROBLEMS.
3. OCP 4225 ALSO MOVING SLOWLY DUE TO MULTIPLE OCP SETUP.
4. OCP 4020-101 RETEST PER TPS 004 WILL UNDOUBTLY SLIP INTO SUNDAY. WE WILL NEED 1 PROP. TYPE PER SHIFT ON SUNDAY TO SUPPORT THIS. PLEASE SCHEDULE PEOPLE. DON! SINCE JACK WILL NOT BE IN PLEASE CONTACT SOMEONE ON 3RD (DOLEY?) TO SCHEDULE A 3RD SHIFTER SUNDAY.

5/3/68 2nd DMR

- (1) 1518 went into a hold early 1700 hrs & have been holding all evening because SCAT 066 was dirty. NVR sample being run (Paul/Walt)
- (2) 4225 @ shift turnover was @ 03-060 ran good all evening (Rivora). At seq 04-073 2400 hrs - DR #2 on meter. Instr. troubleshooting.
- (3) All paperwork cleared on 101 By Walt except TVAR to close down 1518 - this was never documented. He wrote TVAR to delete. Reason - done on 1237.
- (4) Regarding item #4 o/t schedule went out last night, checked with Stone C. he's tied up. Will ask Tom tomorrow night.

5/4/68-HUBER

1. OCP 1518-103 JUST COMPLETING SEQ. 49. DOUBT THAT YOUX WILL FINISH TONITE - PROBABLY FINISH 3RD OR 1ST SHIFT MONDAY. ^{DUAC-100 C/O UNIT}
2. NOTE: AK-286 IS CURRENTLY AVAILABLE IN ~~STOCKROOM~~ STOCKROOM. IF WE DON'T USE IT TONITE IT WILL BE LOANED TO TEST CELLS FOR CRYO. SHELF C/O ON SUN. IF YOU CAN'T FIND IT MON. 3RD SHIFT YOU KNOW WHERE TO LOOK.
3. DON: HARRISON WRITING UP RCS ENG. LK. CHECK ON DR (TO BE RUN WITH TPS 004). IF HE DOESN'T COMPLETE IT PLEASE HAVE CORNWELL DO SO. STEVE WAS ASKED TO WRITE IT LAST NITE.
4. OCP 4225-103 RUNNING SMOOTHLY. 2 DR'S. YOU SHOULD FINISH TONITE.

JACK

Tied up with
4020 all night

5/4/68 2nd DMR

- (1) 4225 @ seq 07-007 shift turnover completed seq 08 @ 2230 hrs - did not go into 09 because no 3rd shift for 103. Didn't think they could finish by end/shift. No new DR's
- (2) 1518 @ 049-001 shift turnover long hold (2 hrs) looking for 100' of wire. Waked all shift on DR #15. Used two grounding methods - same ~~result~~ result. T. Berma knows problem.
- (3) 4020 (101) hookup being pushed by Cornwell starting last @ 2300 hrs - don't know if we have 3rd shift coverage. W. Rivora will cover 2nd shift tomorrow if they haven't finished.

5/4 cont'd.

(4) I wait be in Sunday.

(5) Nobody showed up on 3rd for 4020 - had to shut down - told Daley last night about reg'nt & he was going to handle it - wasn't sure he could get someone.
J. Rhoades

3RD SHIFT 5-6-68

1. 1518 RUNNING CLEARED DR OF SEQ 49 NOT ENOUGH ELECTRICAL PRESSURE, NOW IN SEQ 53. BYPASSED 50, 51 AND 52 AWAITING BLAST SCREENS.
2. 4225 FINISHED EXCEPT FOR SEVERAL STEPS SEQ 4 AND DR CLEAN UP. HELD MOST OF NIGHT BECAUSE OF NO TECHNICIAN SUPPORT AND LOW PRIORITY.

3. PROPULSION LOG 101 INDICATES PER RIVERA. DR 8 COMPLETED
TPS 4 COMPLETED ON LEAK CHECK TP 32823
DR 4 COMPLETED ON LEAK CHECK OF ENGINE VALVES.

NEEDS SIGNATURES ON DR'S AND TVARS OF 4020.

ON 101 WIRES CRUSHED ~~BY~~ ON HARNESS ABOVE HATCH. ONE WIRE TO -P ENGINE AND 5 DAMAGED INST. WIRES. UNDERSTAND REPAIR IN WORK AND CONTINUITY CHECK ALL THAT IS NEEDED
Jack B

5/6/68-HUBER

1. OCP 4225-103 COMPLETE & SOLD TO RASPO.
2. OCP 1518-103 IN SEQ. 54 (VAC-10N). AFTER SEQ. 54 WILL REVERT & RUN SEQS. 50, 51 & 52. NO BLAST SHIELDS REQ'D & CLEAR LEVELS 2 & 3 ONLY.

5/6/68

(1) 1518 in hold till 2300 hrs waiting for signature on safety TVAR to run test without blast shield - started to run again @ 2330 hrs

(2) Prop - reviewing 4128 (103)

5-7-68 THIRD SHIFT BEAMAN.

(1) 1518 RUNNING HAVING PROBLEMS WITH SCAT 66. RELIEF VALVES WERE SET AT 450 PSIG. HAD SOME PROBLEM WITH SAFETY ON BLAST SHIELDS.

(2) 4074 in Pit. MANNY SAYS IT LOOKS LIKE SECOND SHIFT TO NIGHT FOR COMPLETION.

5/7/68-HUBER.

1. TRL FOR 4128-103 RELEASED. NOT TOO MANY CAT. I'S. THERE SHOULD BE A COPY IN CIC I. PLEASE HAVE SPS TYPES (CORNWELL/SAVALA) REVIEW TRL & FOLLOW WORKING OF ITEMS. WE SHOULD BE INTO THIS BY TOMORROW NITE.
2. OCP 1518-103 IN HOLD ALL DAY. RELEASE VALVS. HAVE BEEN RESET TO PROPER RANGE & LV16 HAS BEEN REPLACED & BLOWDOWN ACCOMPLISHED. NOW AWAITING BLOWDOWN RESULTS.

WHEN YOU GET GOOD SAMPLES RUN SEQS. 50, 51 & 52.

5/7/68 2nd DMR

(1) 1518 started up about 1930 hrs. Safety insp. no facility helium turned on, etc. causing OCP to move slowly — found Murphy running without any idea of SCAT 066 configuration — ~~was~~ no schematic in control room. Borrowed one from J. Miller NASA. Please make sure that P/C types get schematics in control room on all SCAT equip prior to start of test.

At seq 050-030 - end/shift

Picked up 1 DR (should have been 3) @ end of shift because of 20 P/C increments on SCAT 066 page - trying to vent to 5# for OCP 05-027, 05-032

3RD SHIFT BETHMAN 5-8-68

① 1518 SHUT DOWN AFTER PRESSURE UP BECAUSE SAFETY HAD CLOSED OFF MOST OF STACK AND 5056 & 5016 COULD NOT BE WORKED. NO ESTIMATE OF START UP TIME. IT WAS SHUT DOWN BY TPE.

② 4074-101 COMPLETED IN PIT.

I TRIED TO FIND YOU BUT COULDN'T WENT HOME Joeke.

5/8/68-HUBER

1. OCP 1518-103 PLOT. SEQS. 50, 51 & 52 (i.e., HI PRES. SEQS.) WILL BE TEMPORARILY BYPASSED. F/C SIMULATORS WILL BE INSTALLED NOW (TPS SIGNED & RELEASED) & WE WILL CONTINUE WITH OCP'S 1510, 1201 & 1090. SOMETIME(?) DURING THIS OCP SEQUENCE WE GO IN & RUN OCP 1518-101 SEQS. 50, 51 & 52. PROBABLY ON A SUNDAY WHEN WE WON'T SHUT DOWN OTHER OCP'S BY CLEARING STACK. THESE SEQS. CAN BE RUN WITH (1) F/C TOOLS, (2) F/C SIMULATORS OR (3) FLT. F/C'S INSTALLED.
2. DON: ALEX O'CONNELL GOING TO 2ND NEXT MONDAY TO REPLACE CORNWELL.

5/8/68 2nd DMR

The story is manpower shortage on 103
GRO4, 5015, 5056, rest on 5081 all running.

(1) 4128 present - no techs worked this most
of shift

104 (2) RCS TPS to apply purge - confusion exists
~~on whether to follow TP13 vs TP14.~~ EO +
FAIR ticket says TP14. TPS = TP13. I think
we would be better off staying out of the
FAIR ticket world. Assist them verbally but
cranking out - TP3 + FAIR ticket for same
job is no go.
Work was done on 2nd by verbally assisting
when req'd & is going nicely.

Bill → ~~Discussed Techs with no go.~~

Bill → What are time changes for Paul & Walt
this week? ATO - S/C 103

D. Rhodewalt

5/9/68 - HUBER

1. RCS TPS SHOWED 2 CM ENGS. MISWIRED.
NATURE OF REQ'D. WIRE CHANGES
STILL UNCERTAIN.
2. F/C SIM. INSTL. GOING VERY SLOW. BACK
SIMULATOR INSTALLED. CHRISTMAS TREE
FOUND TO HAVE DAMAGED FLARES.
PLAD TO SWIPE A TREE FROM
ANOTHER S/C.
3. JACK: IF YOU LEAVE NEWMAN'S
TIMECARD ON MY DESK, I'LL FILL
IN CHARGES & TURN IT IN.

4. WEEKEND O.T. SHEET ENCLOSED.

6/9/68

(1) F/C tree from 107 may be contaminated
Flares have been MR'd & steps in work
to clean existing tree.

(2) 4128 present again started shortly after
lunch - no techs till then.

(3) Won't be in tomorrow - ~~but will~~ but will
be in Sat + Sunday

3RD SHIFT

① I WAS LATE.

5/10/68 - HUBER

1. EXCELLENT TURNOVER JACK! DON
PLEASE TAKE NOTE OF JACK'S EXCELLENT
TURNOVER.
2. F/C SIMULATOR INSTL. GOING SLOWLY.
PLEASE HAVE YOUR F/C TYPES
SPEND 80-90% OF THEIR TIME
ON STACK TO AID THE SHOP IN
FENDING OFF THE BEADY EYES.
IF WE'RE NOT THERE Q.C. TIES
THE TECHS. UP SO BADLY THAT
NOTHING HAPPENS.
3. OCP 4128-103 WILL NOT START TO
MONDAY AT EARLIEST.

5-11-68

1. J. BERG TRIED TO GET SOME WORK
DONE ON T.R. BUT NO SUPPORT.

2. PROOF TEST OF XMAS TREE SENT TO BME ~~FOR~~ ^{PER}

③ WATER LINE ON 101 NEEDS LEAK CHECK. LINE HAD BEEN REPLACED. MAY BE LEFT FOR LAPE.

④ FUEL CELL EFFORT MUST BE GIVEN OPERATIONAL PRIORITY.

3RD SHIFT MOTHERS DAY

① NOTE IN CRYO LOG OF 3RD SHIFT 5/10/68 ASSUMED ~~PROOF~~ PRESS ^{CHECK} OF XMAS TREE WOULD BE REQUIRED. NO NOTES CONCERNING NOT PROOFING IT.

J Beaman

2nd Shift 3/12/68 DMR

(1) No fuel cell or prop activity - 5060 only running.

~~3RD SHIFT 3-13-68 WRONG BOOK~~

① PANEL 8 STILL ON STAND OFF HOLDING UP POWER UP ON 103. LOOKED INTO 5056 & 5015 NOTHING CAN BE DONE UNTIL POWER UP. SHIRK CHECKING 1234 FOR ANY REQUIRED TUNING. JOHNSON WORKING 5056 DR'S.

② 101 CHECK CHECKING ON W/G SAMPLE DR'S. OPEN UP TROUBLE SHOOTER TO TAKE MORE SAMPLES.

③ DAVE IN 5060 SEQ & TRYING TO GET TEMP UP ON PURGE UNIT IN SALT DRYING.

④ CHECKED STACK DR # 29 AND IT IS SOLD. 1033 REMATED TO P35 AND P17 REMATED. ~~SOME~~ THE 240 CONTROLLERS

~~WERE NOT PUT UP IN PLACE AND COVERS OVER THE WIRE TRAY WERE LEFT OFF. A CONTINUITY CHECK WAS MADE THROUGH SWITCH AND INDICATED OK.~~

3R SHIFT 3-13-68

① TPS ON SIM¹⁰³ INSTALLATION IN HOLD UNTIL POWER UP ON 103.

② MANNY & V BERG T.S. DR 82 ON 5060 CONCERNING CROOOS. FUEL TANK PRESS. DR # 28 ALSO SAME PROBLEM NOTED EARLIER. AT 0700 STILL BUILDING KLUGE.

③ 103 LOOKS LIKE AT LEAST 1600 FOR POWER UP.

5/13/68 - HUBER

1. NO PWR. YET ON S/C 103. F/C SIM. TPS IN HOLD UNTIL PWR. UP SINCE INSTR. REQD. TO SAFELY PRES. F/C'S FOR LEAK CHECKS.
2. BUBBLE LK. CHECK. OF RCS SYS. #1 FUEL TK. BLADDER IN WORK ON S/C 101.

5/13/68 2nd DMR

(1) Bladder leak check run on 101. 3 runs all good (34 cc/15 min). O'Connell writing interim conclusion on DR. Will leave final conclu. for day.

- (2) Fuel Cell - 103
 Started working about 2300 hrs - had to wait for power up + 1239 paperwork looking for QC @ 2300 hrs. May get into leak check by 2400 hrs.

3RD SHIFT 5-14-68

① DR #32 COMPLETED BY PUTTING BLANKET PRESSURE ON SYSTEM.

② NEWMAN MADE IN TONIGHT.

5/14/68 - HUBER

1. F/C SIM. ¹⁰³ INSTL. MOVING RAPIDLY.
2. MIGHT BE ABLE TO GET INTO OCP 1510-103 TOMORROW.
3. 4128-103 STILL HELD UP FOR LACK OF TECHS.

APPENDUM - G. J., 103

STOPPED TECHS FROM REMOVING F/C SHIPPING CONTAINER COVERS. ZEKE WATSON WAS NOTIFIED. DEMPSEY & O'DELL SAY THEY'RE GOING AHEAD TO REMOVE THE F/C'S & PUT THEM ON 4th LEVEL. I TOLD DEMPSEY TO BE SURE TO NOTIFY P & W (ART JONES) BEFORE HE WENT AHEAD. WHY NOW I DON'T KNOW, WHEN SIMULATOR INSTL IS NOT COMPLETE YET, NOR HAS 1510 EVEN STARTED. P & W NOTIFICATION & PRESENCE FOR UNPACKAGING OF F/C'S IS A CONTRACTUAL AGREEMENT & HAD BETTER NOT BE IGNORED. (REMEMBER 101?)

5/14/68

- (1) ~~RE~~ Check of 103 RES Fuel Bladder verified its ok
- (2) Fuel Cell types checking leak in valve box -
 At step 123 in 7PS002 - could not pull vacuum, leak believed to be at QD between H₂ valve box & simulator (3636 side) Replaced QD - problem fixed @ 2330 hrs
- (3) 4128 - Finley trying to obtain cal data on Alt-352 most of night without much luck. This plus C14-075 configuration holding up 4128. DELIVERED WITH NO DATE
- (4) Please make sure there are desks available for Walt + Paul in the new area when we move Friday 5/17.

Bill



~~J. Rhoads~~

3RD SHIFT 5-15-68

- ① TPS ON SIMULATORS COMPLETE. NEED 2 WOOD SHEETS.
- ② ~~TR~~ TR L MEETINGS ON 1510 AND 4128 CONDUCTED - PROCEEDING INTO TEST. AT 0500. THE EFFORT IS TO COMPLETE SECTION 1 OF 4128 ON STATION. THIS IS A REAL OPERATION WITH THE NUMBER OF PEOPLE INVOLVED.
- ③ NEWMAN NEEDS TRAVEL REPORTS.

5/15/68-HUBER

1. EVERYONE WILL HAVE HIS OWN DESK AFTER FRIDAY'S MOVE.
2. EXPENSE REPORT WORKSHEETS FOR YAHN, MASUMOTO & NEUMAN ENCLOSED. I CAN HAVE THE FINAL REPORT TYPED ON 1ST IF YOU WISH. TELL THEM THE CURRENT DAILY MEAL LIMITS ARE:

BREAKFAST	→ \$2.50 MAX.	} DAILY TOTAL CANNOT EXCEED \$9.50
LUNCH	→ 3.50	
DINNER	→ 6.00	

3. OCP 1510-103 IN SEQ. 4.
4. OCP 4128-103 IN SEQ 2.

5/15/68 DMR 2nd

(1) 4128 moving slowly but surely. At seq 02-021 turnover, got to 03-012 2330 hrs.

(2) 1510 running like cramp. up to seq 03-022 by 2330 hrs. Could finish on 3rd if no problems.

3RD SHIFT 5-16-68

① 1510 SEQ 11 PICKED UP DR# 2 HTR CHECK WENT AROUND IT AFTER A COUPLE OF HOURS AND PICKED UP DR# 3 APPARENTLY A LEAK IN CASE

② 4128 GOING INTO SEQ 07 TO BYPASS SEQ 05. TFS TO UPDATE COMPUTER CAN NOT BE PERFORMED ALSO SOME TROUBLE SHOOTING BECAUSE OF 7070. M. SAVALA WENT TO 290 TO

ASSIST 101 S/M. TANK PRESSURIZATION PROBLEM. 101 S/M ON THE GOING AWAY DOLLY HORIZONTAL NOW.

③ 101 C/M HAS PROBLEM WITH BAD RTV BEING THE WRONG MIXTURE - TOO MUCH VERMOUTH.

5/16/68 2nd Shift DMR

(1) TPS 009 (system insp. - 104) completed by Mac @ 2000 hrs. There is contamination in the oxidizer side of the "B" system (c/m). Other system & ~~fuel~~ ok. Red residue

(2) 4128 still trying to get into seq 08 @ 2130 hrs - having TCL problems & insp.

THIRD SHIFT 5-17-68

① DR # 2 1510 APPARENTLY RESISTANCE IS TOO GREAT TO REAP OUT AMPERAGE CALLED FOR IN OLP.

② 4128 PROBLEM WITH SPOOD TANK PRES MEASUREMENT. TROUBLE SHOOTING NOW ABOUT 08-071. 0645.

③ NEUMAN WANTS TO WORK SUNDAY FOR SHOP SUPPORT?

5/20/68 - HUBER

1. DON & JACK: WE HAVE HAD THE OCP TPS'S FOR ALL PROP & FCC OCP'S ON S/C 103, 104 & 106 PRETYPED. (1 TPS FOR EA. SECT. I & ANOTHER FOR SECT. II). THEY ARE KEPT IN A BLUE 3 RING BINDER ATOP MY FILE CABINET. PLEASE USE IF THE NEED COMES UP ON YOUR SHIFT.
2. OCP 4128-SC 103 IS STILL IN A HOLD PENDING COMPLETION OF CONFLICTING OCP 0126 TROUBLESHOOTING.
3. PROPULSION PLOT:

□ OCP 4128 COMPLETION
SEQ. 4, 5, 6, PART OF 8, ETC.

□ COMPLETE TPS ON
CIM RCS WRING VERIF.

DECISION NOT YET MADE WHETHER OCP 4224 (& 7018) WILL BE RUN BEFORE OR AFTER AF MOD. PERIOD.

4. FCC PLOT:

□ SHOP REPLACING F/C LINES
DAMAGED OVER WEEKEND.

□ OCP 1518 SEQ. 50, 51 & 52
HI PRES. SEQ. 5.

□ FLT. F/C INSTL. VIA
FAIR TICKETS.
OCP 1201

↑
OCP 201 PROVIDES PURGE
FOR F/C INSTL. PER FAIR TICKET.

5. ON THE F/C LINES THAT WERE DAMAGED & REPLACED, ENGR. IS MUMBLING THAT THEY HAVE TO BE PROOF TESTED. WE ARE TELLING THEM TO GO TO _____! IGNORE PROOF TEST REQUESTS. WE WILL HANDLE PROBLEM ON DAYS (PROB. AT ASST. PROGRAM MGR. LEVEL).
6. WHEN RUNNING SEQ. 50, 51 & 52 OF OCP 1518 (HI. PRES.) WE WILL CLEAR LEVELS 2 & 3 ONLY AS STATED IN TUARS.

5/20/68 2nd DMR

(1) 4128 started up @ 2130 hrs. Going into seq 08

(2) Regarding note 5 above. There is a spec vegint to overpressure repaired joints to 1.25 x oper. Since they had a stop in the fair ticket it was left open - this can be done during 1518 & then closed out. We definitely can't ignore item.

5/21/68

4126 GOING ON IN SEQ 08 SOME PROBLEMS WITH INEXPERIENCED TECHS.

FINALLY GOT MILIPORE SAMPLES OK.
DON TRYING TO GET 1518.

5/21/68 - HUBER

1. OCP 4128-SC103 IN SEQ. 6 & HOLDING. THIS IS THE LAST SEQ. TO BE RUN.
2. OCP 1518-SC103 SEQS. 50, 51 & 52 SCHEDULED TO RUN TONITE.

5/21/68 2nd DMT

Bill → (1) Will Alex O. remain on 2nd for next shift change on June 1.?

(2) 4128 ~~run into a demated connector - picked up DR~~

(3) Decision made again to proof pressure lines which were repaired - the spec which requires this is MA0203-0343. J. Miller (WARA) + Eng (Bourman) couldn't understand (as I couldn't) the reluctance to do job. Contacted T. Claus & told him of your contact with Cuzz. It seems Cuzz gave Claus the job of following this up with Eng. T. Claus gave final go ahead - called you (Bill) twice to keep you informed but to no avail.

(4) 4128 - Picked up DR 14 - no M/A. connector cable from SPS engine to FCSM box not connected & cable to short to make connection as ~~not~~ routed. EO to come in work. Understand this was on TCU as CAT I & was dropped to CAT III.

3RD SHIFT

① 4128 CONNECTOR O RING TOOK SEVERAL HOURS TO OBTAIN OUT OF NIGHT STORES, THEN THE MR. NEGLECTED TO CONNECT THE THING BACK UP. SEVERAL HOURS WERE LOST FINDING THE PROPER PAPER

WORK TO DO IT WITH. QC. FINALLY CAME UP WITH AN INFORMATION DR TO ACCOMPLISH IT.

② "PROOF PRESSURE" AFTER TALKING TO YOU ON PHONE ~~IF~~ I TRIED TO TURN THE "PROOF PRESSURE" OFF, BUT FOUND THAT THE WHOLE WORKUP TPE TC'S AND FANG, HAD ~~BE~~ SET IT UP TO GO. SO I TOLD DON TO GO AHEAD AND RUN IT. DELAYED MOST OF SHIFT GETTING RELIEF VALVES. THIS EFFORT WAS NOT COMPLETELY SERIAL BECAUSE BONDERS WERE WORKING AREA MOST OF NIGHT.

Jack.

5/22/68 - HUBER

1. OCP 4128-SC101 IN SEQ. 06-061. VERY LITTLE LEFT TO DO. REQUIRE COOLING TO CONTINUE. 4 DR'S CURRENTLY OPEN - NONE REQUIRE T/S'ing.
2. OCP 1518 IN SEQ. 50. PLOT IS TO COMPLETE SEQS. 50, 51 & 52, THEN DO "PROOF TESTS", THEN DO FIC INSTL. & OCP 1201.
3. WE WILL PROOF TEST LINES WILL NOT USE TUNKS ^{written last nite} HOWEVER SINCE THEY APPLY 1260 PSI INSTANTANEOUSLY. WILL USE DR OR TFS TO APPLY GRADUAL PROOF.
4. FIC 2 IS ^{currently} POSITIONED IN SECTOR III. PLUMBING CANNOT BE CONNECTED NOR CONNECTORS MATED NOR

OCP 1518 ✓
SEQS. 50, 51 & 52

PROOF PRESSURE LIVE JOINTS ✓
TPS (OR ON DR)

~~HE LK. CHK. W/3 LINE
MR. SCRATCHED~~

OCP 1201
ESTABLISH PURGE & "SAFE" FIC CONNECTORS

INSTL. FIC'S 2 & 3
FAIR TICKET

OCP 1201
LK. CHECK FIC'S 2 & 3

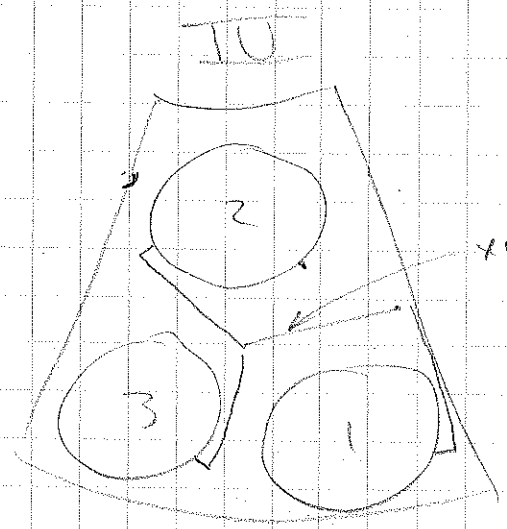
INSTL. FIC 1
FAIR TICKET

OCP 1201
LK. CHK. FIC 1 & INSTR. CHECKS.

OCP 1090

{ W/3 EVAC. & FILL
COMPRESSIBILITY CHKS. (A14-343, GREASE GUN)
W/3 SAMPLES
BYPASS ULV. C/O

REQUIRES AC & DC



FIC 3 INSTALLED UNTIL PURGE
IS AVAILABLE & CONNECTORS ARE
SAFED PER OCP 1201.

5. FIC-CRYO. PLOT ATTACHED.

5/22/68 2nd DMR

(1) 4128 in hold - lack of water/glycol. because
5015 running trim unit for S/M

(2) 1518 - had approx 1 1/2 hr hold do to safety
flap. GSE flex hoses not restrained - item
was not tagged till resolved - understand
day shift bought safety bought installation - it
was pretty shoddy - you (Bill) should bite
J. Parker on this.

(3) Some rumbles on pretesting 4224, but
managed to quiet Benders. Your turnover
info. helped.

(4) J. Maulin here quite late working on TPS for
proof pressure.

3RD SHIFT 5-23-68

(1) NOTE 3 ABOVE ALSO HAD REQUEST TO
START HOOKING UP PER 4224 SECTION I
BUT UNDERSTOOD THAT 4224 WOULD BE
RUN AFTER ΔF MOD. CHECKED TPE'S
NOTE BOOK AND THEY ARE PUSHING IT.

(2) OCP 1518 IN SEQ 050 AND RUNNING
SLOW FOR LEAK CHECKS. TRYING TO GET
PERMISSION TO SEND PEOPLE IN TO
TK CABINET TO SUPPORT 5056 AND
OTHER EFFORTS.

(3) OCP 5015 ALL TORQUED UP ON CONTRAVALVE
ETC. IT WILL TAKE SOME TIME TO
START UP 4128 AGAIN.

(4) SHOP WANTED TO START WORKING ON

F/C INSTALLATION BUT SHOWED THEM PRE REQUISITES AND THEY SLOWED DOWN. THESE NOTES HELP CONSIDERABLY IN DEFENDING OUR POSITION.

5. TALKED TO SMUCK AND HE INDICATED HE WANTED TO RUN AT LEAST THE BLOW DOWN OF 4224. THE CONNECTORS ON S/M FOR TPS 26 COULD BE VERIFIED AFTER THE BLOW DOWN.

6. CAME DOWN IN PRESSURE IN SEQ 050 OF 1518. AT ABOUT 0630 I HAVEN'T HEARD OF ANY LEAKS.

5/23/68-HUBER

1. WEEKEND O.T. SHEET ENCLOSED. WE ARE SCHEDULED FOR SAT & SUN ON 103 & 104. PROP/FCC ACTIVITY ON 103 ONLY.
2. DON/JACK: IN BOTH PROP. & F/C AREAS. IF ONE OF YOUR TYPES NEEDS A NITE OFF, I WILL MOVE A 1ST SHIFTER DOWN FOR 1 MAN/SHIFT OVER WEEKEND (i.e., 1 OF YOUR 2 WILL HAVE TO WORK BOTH DAYS, THE OTHER CAN HAVE A NITE OFF).
3. SC 103 AP MOD. SCHEDULED TO START ABOUT TUES. EXPECTED TO LAST 11 DAYS.

Have done
see list.
DME

4. OCP 4128-103 STILL IN HOLD AWAITING W/G COOLING.
5. OCP 1518-103 IN SEQ. 51. WILL COMPLETE ABOUT 5 P.M. WITH ANY LUCK.
6. TPS TO PROOF TEST F/C LINES WRITTEN & SIGNED.
7. AFTER PROOF TPS GET INTO OCP 1201 TO PROVIDE PURGE & CONNECTOR "SAPING" FOR F/C INSTL.
8. DON: PLEASE HAVE FCC TYPES RESEARCH 1201 TRL'S TO MAKE SURE WE ARE READY TO GO ON OCP 1201 ON 3RD.

5/23/68 DME 2nd

- (1) Prop types working 4224 all shift. Went thru many test kits & could not hook up one of them for one reason or another - went to Bange @ 2315 hrs. He said he hadn't been notified of problem. Seems like the tech from test kit crib who was helping Alex/Tom didn't know "whole story". Bange assigned man to work with prop. types to rework kits to fit.
- (2) F/c in seq 52. Have TPS for proof test. It didn't include leak test of joints after proof - mod sheet cranked out to press. with He to proof then leak test after. Both Paul & Walt to tie up to check TRL. I contacted Sanders - he could not find TRL.
- (3) 4128 holding

5-24-68

- ① COMPLETED SEQ 51 AND WENT INTO PROOF TPS MANY PROBLEMS SEALS RELIEF VALVE LINES TOO SHORT ETC. CAN'T FIND TCL. ON SECI 1201
- ② 4128 IN HOLD FOR 5015 WHICH IS HAVING PROBLEMS.
- ③ 4224 HOOKING UP TEST KITS, MANY PROBLEMS DISCOVERED DURING 2ND SHIFT.
- ④ PROOF TPS IN WORK BEFORE AFTER SEQ 51 SEQ 52 WILL FOLLOW.

5/24/68 - HUBER.

1. PER NORM CASSON WE WILL WRITE TVARS TO "SWEEP" ALL FIC CONNECTORS (i.e., VERIFY NO VOLTAGE ON ANY PINS) PRIOR TO GIVING SHOP OK. TO MATE CONNECTORS.

5/24/68

- (1) \$ 1201 } pretest all this shift
4224 }

Jack - TVAR ready to perform this - see Newman.

Run in Summary
4224 - 30 day blowdown on C14-075 no longer valid (past 30 days). Also problem on blowdowns.

~~MA0610-012.~~

MA0610-018. V/S MA0610-017.

5-25-68 THIRD SHIFT.

- ① 1201 QUESTION ON CHRISTMAS TREE CLEANLINESS. Q.C. STATES IT IS OK THE WAY IT IS BAGGED BUT ENGINEERING WANTS MORE PROOF?
- ② 4224 ON THE LINE THIS AM. JUST BARELY GOT STARTED. THOUGHT WE MIGHT GET INTO 4128 BUT 5015 NOT FINISHED YET.
- ③ 5015 SHOULD BE READY SOME TIME BEFORE NOON THEN 4128 CAN GET GOING.
J. BEAMAN.

5-25-68 ① OCP-4224-SC103 DR1 - NO GAS FIRST FLOW THROUGH ENGINES - FINALLY BOILED DOWN TO WHAT APPEARED TO BE COCKPIT PROBLEM - DR SOLD.
JW

- ② OCP-4224-SC103 DR2 - INITIALLY APPEARED TO BE LEAKY TEST KIT BUT LATTER TRACED TO C19B8 (+ PITCH SYSTEM 2), FUEL INJECTOR VALVE STUCK OPEN - VERIFIED VALVE CLOSED - NO POWER FROM HAND CONTROLLER. TED CLAUSS IS LOOKING FOR A NEW ENGINE - ME 901-0067-0019 (Rocketdyne) which goes into V16-417016-31 (PITCH) AND IS INSTALLED BY V36-417001 (Next Assy.) - JUST IN CASE WE NEED ONE

③ OCP-4128-SC103 - INTO TEST AT 10:00 AT 10:39 06-065 WHEN, OR MILLISECONDS AFTER, R210 XXX1 WAS X/V DC MNA AND DC MNB POWER WAS LOST. - DR 16. - THE R-START WAS VERIFIED. AFTER A QUICK INVESTIGATION, POWER WAS PUT BACK ON WITHOUT ANY EXPLANATION. TWIGHT REQUESTED PARKER TO INVESTIGATE PROBLEM. NOW 4128 CANNOT GET AN ACE COMMAND THROUGH R210 XXX1.
K.D. Manha

④ IF POSSIBLE, AFTER 4224, OR 4128, TRY TO PERFORM TPS 037-GEN-009 SC103 SPS HEATER C/O. K.D. Manha

5/25/68 2nd Shift DMR

Finley

(1) 4128 (103) T/S on DR 16 revealed an R-Start was out of configuration. Inter. Conclusion written & back into OCP @ 1800 hrs. See further notes

Ames

(2) 4224 (103)

Bypassed DR#3 further work on this will be needed on days. Went into other system - in Seq 01-060 @ 2330 hrs - having some problems pulling connectors on glands - accessibility

(3) 1201 (103) At shift turnover had 8.1 to clear prior to going into Seq 02. Finally broke loose of paperwork & went into Seq 02 @ 2330 hrs.

④ 4128 until. After finding problem on DR #16 recycled & run to seq 06-100. Picked up DR #17 No response from TGS. S/C ok. TCR group T/S patching from 352 / # 119 to TGS room @ 2330 hrs

THIRD SHIFT

① 1201 ZAPPED HAD TO GO BACK AND SELL PORTIONS OF SEQ I. WENT INTO SEQ II SEQ 04 FIRST FEW STEPS THEN INTO HOLD FOR POWER LOSS. BUT NOT BEFORE RECEIVING A DR ON EVENT LIGHTS AND VALVE BOX CONFIGURATION PROBLEM

② 4128 TROUBLE SHOOTING ON DR #17 CAN NOT TROUBLE SHOOT UNTIL POWER PROBLEM RESOLVED.

③ 4224 BARELY RAN FROM DR TO TVAR THEN INTO HOLD FOR POWER LOSS

2nd Shift 5/26/68 DMR

(1) 4224 @ Seq 01-182 @ 2100 hrs & running good - @ 01-197 end/shift

(2) 4128 had problem during shift turnover on M/A but recycled & jobs were not repeated. See Cornwall for details.
4128 completed @ 2400 hrs

- (3) 1201 (103) In seq 04. ~~preparing~~ preparing for other cell installations - need close out pictures etc. for first cell. One DR on dinged line - should have been in TEL for start of 1201 but was missed. Understand it was a small scratch that will be polished out.

Jack (4) If you have people you might work TPS noted on pg 84 (note #4)

- (5) Wait be in tomorrow - please make turnover directly to troops

DMR 5/26/68

- ① 1201 HAD PROBLEMS WITH HYDRO CARBON ANALYZER FINALLY CHANGED TO HOKE BOTTLES.

- ② DINGED LINE PROBLEM A/DWB WITH RE TEST REQUIREMENTS. DR #38 LINE HAD BEEN TWISTED. ~~DISPOSITION~~ DISPOSITION TO OVERPASSES.

- ③ 4128 COMPLETED MANNY ~~WORK~~ ^{WORKER} ~~ON~~ ^{ON} DISCONNECTING. ~~AND LEAK CHECK.~~

- ④ 4224 TROUBLE SHOOTING TO SEE IF STUCK VALVE CAN BE CLOSED, SO REST OF TEST CAN PROCEED NO LUCK S/FMR.

~~3A~~

5-27-68 ① CM RCS + PITCH SYSTEM 2 ENGINE J.R.M. IS BEING REPLACED BY PAIR TICKET SC103 EPS F032.

- ② SHIMIZU IS PREPARING A TPS TO PROVIDE A PURGE DURING R & R. TPS V36-EPS-033 WILL REQUIRE ATO ENGINEERING SUPPORT.

- ① McClintock IS PREPARING A TPS TO RETEST ENGINE WIRING, DYNATUBE "PROOF" AND LEAK; and INJECTOR VALVE LEAK CHECK V36-EPS-034

- ② OCP-4128-SC103 DUTTON AND CORNWELL ARE LOOKING INTO A POTENTIAL TVAR PROBLEM. EMS LIGHT - DIMLY LIT WAS CHANGED TO OFF. REASON SEEMS TO BE INADEQUATE. SINCE FINLEY WROTE TVAR MAYBE HE HAS MORE INFORMATION ON TVAR

- ③ SC103 PROP RETEST - J. TYLER IS WORKING WITH R. COULOMBE TO COME UP WITH A MINIMUM PROP RETEST. G. JOHNSON IS DOING LIKE WISE FOR FUEL CELLS AND CRYOGENIC STORAGE.

- ④ RELIABILITY REQUESTED OK TO TAKE A LOOK AT SYS 2 WHILE PURGE WAS ON SYSTEM FOR ENGINE REPLACEMENT. STAN HARVEY (NASA) WOULD NOT SIGN MOD BECAUSE THE DETAILS OF CHECK ARE NOT SPELLED OUT. SCHMUCK SAID IF MOD IS NOT SIGNED BY 16:45 KILL THE INSPECTION MOD.

- ⑤ ENGINE REMOVED - PURGE DISCONTINUED. FLEX LINES AND DYNATUBES ARE BAGGED AND SEALED. ATO ENG WILL BE REQUIRED TO PROVIDE PURGE FOR ENGINE REPLACEMENT.

- ⑥ SC103 FCC DR 38 - TWISTED AND SCRATCHED LINE IS BEING

RESOLVED BY ENGINEERING MANAGEMENT
1201 IS WAITING. W.D. Mamba 5-27-68

3RD SHIFT 28 ~~JUNE~~ MAY 1968

① PURGE ON FOR ENGINE INSTALLATION -
ENGINE NOT BEING PLUMBED IN UNTIL
CONTAMINANT RESOLUTION.

② EFFORT MADE TO TVAR INTO SEQ 03 4224
ON QUADS. CHECKING TK'S ~~PROBLEMS~~
~~PROBLEMS~~ PROBLEMS EXIST.

③ METALLIC CONTAMINATION FOUND IN
DYNATUBE FITTING IN BURST DISK
CAVITY. XRAY'S BEING TAKEN
AND STEEL SLIVER ANALYZED. ~~FOR~~
ANALYSIS NOT AVAILABLE THIS SHIFT.

④ M & T'S ON TOP OF IT.

⑤ 1201 FINALLY BACK IN TEST AFTER
CLEARING DR #39. RUNNING TVAR
TO VERIFY THAT CONNECTORS ARE NOT
HOT PER AGREEMENT WITH HUBER AND
ODELL. AFTER THIS FUEL CELLS GO IN
PER TICKET.

5-28-68 ACTION: DO WE WANT MAKING TO INSTALL
AND CLOSE-OUT FUEL CELL SIMULATORS? ^{N.} CASSON.
COORDINATE WITH O'DELL & NAPIER.

NO FUEL CELLS INSTALLED FOR 1115
A14-084 MUST MATE WITH FC2
WHICH ARE NOT ACCESSIBLE WITH
SIMULATORS.
ALSO SOME PROBLEMS HAVE OCCURED
DURING SIM. REMOVAL. Mamba INSTALLATION

OF SIMULATORS WOULD NOT CURE THESE
PROBLEMS

CHANGE 1518 - FLOW WISE
1518 - PROVE PRESSURE LEAK CHECK
DONE BEFORE SIMULATOR
NEED TO REMOVE SIM 3 TO GET
ACCESS FOR 1115. AFA IS
QUESTIONABLE IF SIM 3. CAN BE
REMOVED BEFORE REMOVING SIM 1
BUT IF NOT IT IS BELIEVED
REMOVAL OF SIM 1 WILL GIVE
ACCESS FOR INSTALLING A14-084.
THEN WHICHEVER SIM IS REMOVED
FOR 1115 MUST BE REINSTALLED
FOR 1518

② PLAN OF ACTION - SC103 RCS
a. WORK Spk 54 - No constraint to ENG. INSTA.
b. INSTALL ENGINE PER FAIR TICKET -
NEED -075 FOR PURGE. V36-EPS-033
c. RETEST ENGINE PER V36-EPS-034
d. NEED -075 FOR RETEST
e. TEST Seq 01 of 4224 - NEED
-075
f. TEST Seq. 02 & 03 of 4224 -
NEED -075 for purge pressure
for valve signatures. NOTE
that the -075 is req'd for
b through e which makes it
most undesirable to try to do
any "b" through "e" items in
parallel. W.D. Mamba

③ Beaman & Rhodewalt, Lorraine
has numerous Fuel Cell personnel
expense reports that will be
delinquent soon. I will talk to

Wm Farr about his. H.D. Manha

① SC104 - SPS ENGINE INSTALLATION IS IN WORK - MAKE SURE INDIVIDUAL HEATER RESISTANCES ARE RECORDED ~~AFTER~~ BONDING HEATER TO ENGINE BUT BEFORE INSTALLING HEATER WIRES TO TERMINAL BOARD.

② SC104 - TPS V36-RCS-020 PREP CM RCS FOR FLUSH CAN BE PUT INTO WORK. SC103 HAS PRIORITY OVER SC104.

H.D. Manha

5/28/68 2nd DMR

(1) Pitch engine on 103 mechanically installed but no elect or pneumatic hookup.

(2) No running on 4224. Day shift diversion requires completing engine installation + retest before returning to 4224

(3) F/cells - 1201 in day 06-020 had long hold on mass spec. Completing leak checks on 2nd P/L

5-29-68

① TICKET TO INSTALL ENGINE FINALLY CAME OUT. BERG & SAVANA MONITORING

② 1201 MANY PROBLEMS WITH HE SUPPLY AND RELIEF VALVE ON VALVE BOX.

5-29-68 ① PER NORM CASSON - ALL TVAR'S AND DR'S MUST BE SIGNED BY ALL PARTIES BEFORE POST TEST. SELL DR'S! 79 OPEN!

② SC103 + P Sys 2 RCS ENGINE INSTALLED AND RETESTED PER TPS V36-EPS 034. ATTEMPTING TO GET BACK INTO OCP 4224.

③ 1201 HAVING LEAK PROBLEMS - MANY UNCERTAINTIES AT 1519.

④ SC104 - RCS - HARRISON HAS REQUESTED ENOUGH PRIORITY SO THAT TPS V36-RCS-020 PREP CM RCS FOR FLUSH WILL BE ACCOMPLISHED BY FRIDAY SO FLUSH CAN COMMENCE ON WEEKEND AS SCHEDULED.

⑤ WEEKEND O.T. SHEET ENCLOSED. WE ARE SCHEDULED FOR SAT. AND SUN. ON SC103 AND SC104.

PROP - OCP 4224

FCC - OCP 1201

- PREP 1090 (MURPHY ATTENDED TRIL TODAY)

SC104

PROP - SPS ENG. INSTL. (MIN.)

- CM RCS FLUSH (SUPPORT)

FCC - PREP 1518

DON/JACK: NOTE THAT AMES HAS VOLUNTEERED FOR 2ND PROP ON SATURDAY. IF IT WON'T WORK CHANGE IT. IF ABSOLUTELY NEED RELIEF FOR ONE OF YOURS LET ME KNOW - MAYBE I CAN HELP YOU!

⑥ SC103 OCP 4128 AND 4224 DR'S ARE INTO TYPING. FARR IS WORKING ON FCC DR'S.

⑦ MARTIN SUGGESTS THERE MAY BE A DELAY ON SC104 1518 OR SC103 FCC RETEST BECAUSE BOTH REQUIRE THE ONE AND ONLY SKAT-049. GOING TO REQUEST ANOTHER COPY OF SKAT-049 — MARTIN SAYS NASA AGREES. *J.R. Manha*

⑧ NO PROP OR FCC WORK ON THURSDAY — FROM MIDNIGHT TO MIDNIGHT.

S/29/68. 2nd DMR

(1) DR Summary typed — see enclosure

(2) 4224 — running good in seq 01 — will try to finish this shift but may not make it

(3) F/C — 2/5 all night in DR#6. 4 mm fuse line to F/C #2 ~~was~~ was badly misaligned. Work up-man realigning however entire line had to be removed to rework. Not reinstated at end of shift. Walt ~~dep~~ depressurizing @ end of shift & closing down OCP.

(4) ~~Farr~~ Alex tried to get 104 TPS in work on RCS, however, ~~which~~ vehicle had been powered down. Attempted to get CIC to power up to ~~perform~~ perform TPS but no dup. Harrison apparently aware of this prior to leaving & tried to stop them.
→ Down @ 01-098. *JMR*

THIRD SHIFT 5-31-68

1. J. BERG RUNNING 4224 IN SEQ 01

2. M. SAVALA ASSISTING IN RUNNING AND CHECKING ON DR'S.

3. 1201 TRYING TO CLEAR DR'S AND GET BACK INTO TEST. STACK DR ON WIRING STILL OPEN RETEST REQUIREMENTS ON CONNECTOR MUST BE WORKED OUT. CONTINUITY CAN NOT BE DONE BECAUSE SOME CM/SM INTERFACE CONNECTORS WOULD HAVE TO BE DEMATED. DR#6 ~~is~~ & 11 open.

4. 4224 SEQ 01 COMPLETED IN SEQ 02 HAD SOME CONFLICT WITH 1518 ON C/B ~~usage~~ USAGE.

5. SCHEDULE FOR 104 ON SUNDAY INDICATES NO SUPPORT.

5-31-68 ① PER HUTCHINSON, FROM FIRST ~~WOM~~ MANAGEMENT, SC104 WILL TEST ON SATURDAY AND SUNDAY AND SHOULD BE SCHEDULED ACCORDINGLY.

② SC103 Fuel Cells — 1201 — Fought, leaks all day — no further details

③ SC103 — 4224 — Problems
a. Found AUTO RCS SELECT must be in MN A or MN B position for direct signatures.
b. Found guids were not connected. Should have been.
c. C14-650 check — TGS misread

Huber

date 5-31-68

CSM Systems Supervisors:

S/C 104 full crew to work Sunday, 6-2-68.

Saturdays effort thru Sunday.

W. R. HUTCHINSON

6-1-68

I WILL NOT BE IN TONIGHT
Jack.

6-1-68 ① DON, I SCHEDULED AMES FOR SECOND SHIFT SATURDAY AND DID NOT CHANGE FOR FOLLOWING REASONS.

a. APPEARS WE HAVE COMPLETED 4224 ON SATURDAY - PROBABLY SC103 WILL BE POWERED DOWN OR LITTLE PROP WORK BY SUNDAY SECOND SHIFT.

b. SECOND SHIFT SUNDAY TO FIRST MONDAY IS A ROUGH TRANSITION

c. THERE IS PROP WORK THAT CAN BE DONE ON ANY SHIFT.

1. REVIEW SC103 4171 (combined 4224)

2. PREPARE TPS TO LOOK FOR CONTAMINATION IN SC103 CM RCS SYS 1.

3. WORK ON SPEC E.O.'S THAT MUST BE SOLD.

d. I HATE LAST MINUTE CHANGES, UNNECESSARILY.

② WALT YAHN - REFERENCED NOTES DON'T SAY MUCH - I'LL SEE WHAT I CAN DO FOR YOU - VOLUNTEERS? 6-1 to 6-8?

③ SC103 4224 - Reviewing data and rerunning as req'd to get missed data. Expect to finish on this shift.

④ SC103 - 1201 - Received NASA DR because of procedure used on DR 36 & DR 39 - NASA ALL WET FARR putting good words on DR.

Sounds good - Thanks DMR

Thanks again DMR

⑤ SC104 - 1518 - JOHNSON BELIEVES 1518 WILL BE "ON THE AIR" BY SUNDAY.

⑥ SC104 - CM RCS. PREP FOR FLUSH IN WORK.

⑦ DORNIS WILL WORK 6-2 thru 6-6 SECOND SHIFT. WILL MAKE ARRANGEMENTS NEXT WEEK FOR 6-7 & 6-8 SECOND SHIFT.

6/1/68 2nd DMR

103 (1) 4224 completed tonight @ 2045 hrs. Review of DR's indicates DR#8 only one really open (data review of 02-063 - 02-072) ~~the~~ The other ones need Harvey's signature to close out. Looks like these in fair shape

103 (2) 1201 re-running fairly smooth. In seq 07-006 @ turnover. F/c #1 installed & hooked up pneumatically

104 -> (3) TPS 020 completed. I understand they took bolt-cutters to the "B" system on 104 - this per an MR-DR #58. Sounds like serious problem - where will be system be proofed? etc.

6-2-68 ① I was here when Finley, Ames, and O'Connell all showed up. O'Connell was very disappointed and all three thought it quite a waste having all three on one shift and O'Connell not getting a day off. We must better coordinate our

week end efforts!

② SC103 - 4224 McClintock is trying to find why we didn't get the initial run of CM RCS Heaters data. - DR 8.

③ SC103 - 1201 - Farr attempting to clear open DR's.

④ SC104 - 1518 - Johnson attempting to get into test.

⑤ SC104 - CM RCS FLUSHING - Harrison - Very slow - lost torque tip in aft compartment and lost "fote" box of equipment accumulated specifically for the task.

6-2-68. I found no mfg support scheduled for 104, RCS flush (DR 58), when I came in. Finally, thru TPE, got 2 men at 1900 hrs. One man worked the whole shift on flushing kit assy. The other man refurbished one line & had to quit because lack of brazer for the next step. He was not an assy man. I let him go. The brazer that was scheduled in, went to Houston & they could not find another one to bring in. I am told they layed off the best brazer a short time ago. He would not come in either!

alex

3RD SHIFT 6-3-68

① SAVANA FOLLOWING BRAZING AND SPS ENGINE EFFORT

② SC104 1518 STILL WORKING SECTION IF HAVE TCL TO REVIEW. TER NEEDS TCL ON SCAT 066 AND AA-049. STILL NOT ON STATION.

6-3-68
WDR

① 2nd and 3rd shift - There is a shortage of FCC personnel - tentatively, this weekend I will not be able to assist 2nd and 3rd shift coverage. Dormis will be out. Gene Johnson is sick. Farr is covering SC104 - 1518 efforts. Martin is trying to clean-up FCC paper. Murphy is out often - and on getting a physical.

② SC103 - RCS - A TPS has been written to look for contamination in CM RCS 1. TPS in NASA office for signatures. - Signed 16:30

③ SC103 - SPS - 4128 - Post test tomorrow at 10:00.

④ SC104 - 1518 - Need many signatures on many TVARS before entering test. - ACTION!

⑤ SC103 - 4224 - Data reveals, CM AUTO CLOSING trace was clipped because PBZ was not disconnected - Arc suppression

6/3/68

(1) T. Fenley sick (dropped cement block on foot)

(2) 1518(104) priority #4 on sched. Had no tech support till after lunch(3) ~~to~~ Bender talked up 1090 on 103 however this is not on 24 hr schedule. Told F/c types to concentrate on 1518 TVAR's STC book etc.

Jack → (4) Conflict between OCP-1036 & flushing ~~for~~ MR-DR #58. 1036 opens, ~~and~~ closes RCS valves. Finally got an agreement that when they really start flushing which won't be far off they will shut down 1036 - otherwise they'll really goof up the RCS system. Watch this!!

(5) F/c struggling in part I of § 1518. Being hurt by lack of personnel.

6-4-68
① 1518 TVAR's TO BE SIGNED ~~AT~~, NO INFO ON TK EQUIPMENT,

② HAD REQUEST TO CHECK ON ALIGNMENT OF SPS ENGINE. HAD DISCUSSION WITH SHOP AND LET THEM KNOW THAT IT IS BEING INSTALLED ON A TICKET PER A SPEC AND REQUIRES M&TS SUPPORT. STATED THAT WE WOULD FURNISH THEM WITH AN OLD COPY OF A TPS THAT THEY COULD USE AS A GUIDE IN PREPARING A FARE TICKET.

③ WORK WAS GOING ON FOR FLUSHING HOOP UP, BUT LOOKS LIKE IT IS VERY COMPLEX AND DIFFICULT.

6-4-68 ④ Refer to 6/3/68 2nd Shift entry number 3. Spacecraft power is required to perform 1090 so ~~cdol~~ ~~gtd~~ until P/C is powered up. ~~gtd~~ ~~Manha~~

② SC103 - 4128 POST TESTED - TWO OPEN DR'S REMAIN OPEN. =

③ SC104 - 1518 - GO! TRU's?

6/4/68 2nd DMR

(1) F/C 1518 still in pretest - hooking up SCAT 49. Jack - the SCAT 066 which is reg'd later in OCP although called out in pretest will be delivered from Lab & Test late 2nd or sometime in 3rd. This is the 2nd unit (first one is on 2D for S/C 103).

(2) RCS flushing people trying to get a vacuum on their system & having real problems. 1036 still running. Alex talked them into removing about 1 dozen valves & vacuum is improving

Bill → (3) Regarding 5018 blast shields for reg 050. I understand from safety that these will still be reg'd for reg 050 ~~although~~ although TVAR'd out of pretest. Please get doc to either get the shields or a ~~waiver~~ waiver. S/C 103 lost 4-6 hours at this point in the OCP trying to get resolution on problems.

^{wrong book}
~~(4) Metgner worked on DR # 1 - put conclusions~~

3RD SHIFT 6-5-68

(1) FLUSHING BEGAN ABOUT 0230
 FIRST SAMPLES CONTAIN COPPER.
 1036 COMPLETED AND NO PROBLEM
 WORKING AROUND PROP ISOLATION VALVES.

(2) 1518 FINALLY ⁰⁵⁰⁰ CRAWLED UP. MUCH
 CONFUSION ON CONSTRAINTS AND SECTION
 1 OF OCP.

6-5-68 (1) PLAGUED BY ILLNESS, MARTIN, MURRAY,
 W.R.M. DORNIS.

(2) MANNY SAVALA WILL BE ON JURY
 DUTY FOR TWO MONTHS, COMMENSING
 JUNE 13 - MONDAYS AND WEDNESDAYS
 AND OTHER DAYS AS REQ'D.

(3) 1518 - SC104 STILL NOT TESTING -
 OCP - 9028 WAS NOT SOLD BUT
 FORTUNATELY THE MILLIPORE AND
 HYDROCARBON CHECK WERE SATISFACTORILY
 COMPLETED. MISSING AND LOOKING FOR
 - 404 CABLE.

(4) SC103 - MUCH EMPHASIS BEING PLACED ON
 DR CLEAN-UP AND RETEST TPS'S.
 RETEST - PROP - J. TYLER ROUGH DRAFT
 - FCC - G. JOHNSON ROUGH ^{COMPLETE} 50% COMP.

(5) IS A.R. O'CONNELL PREPARING A "SKILLS"
 INDEX/EMPLOYEE PROFILE. SEE IL
 FROM R.L. DILLMAN WHICH STATES HE
 IS DELINQUENT.

(6) SC104 - 1518 - DRI BEING T/S - APPEARS
 WE MAY HAVE A BAD F/C #3 O₂
 REACTANCE VALVE. W.R. Maiba

6/5/68 2nd DMR

Bill → (1) Regarding replacement for Walt next week. Have
 Metgner on 2nd in ECS. - He was old F/C type
 will shift him to F/C for next week to take
 strain off of F/C days.

Jack (2) See J. Tandy is on delinquent list for skills
 index - you might check. - Folley's man

(3) T/S on DR #1 (1518) revealed Reactant Valve
 on F/C #3 & its actuating switch are both
 burned out.

(4) 1090 was on 24 hr schedule - they are in pocket.
 Checked impound book (on 4th level) & surprising enough
 quite a few items are tagged off. Had a check run
 on fig 1-1 by ECS type (Masamoto sick) & he went
 thru fig 1-1 config. except for internal portions of
 valve boxes. Said it was all pretty good except gauges
 are missing on a part on on 6th level. Checked
 with 7ER & they said they're being calibrated
 Enclosed is marked up copy of 1090 that was
 checked.

Also got Banga to put into work a TPS to
 check the SK-20-176 (EPS w/o servicing unit
 Results unknown @ 2330 hrs. Got down to less than 100 µ
 & rose to 200 ± 15 µ in 30 minutes. - see enclosure.

(5) Safety flap on Flushing (RCS) because of
 too many injuries & generally shoddy & hazardous
 flushing procedure. Got safety on it & things
 are straightened out (they're then flushing &
 believe)

(6) Ref notes on Pg 103 - F/C 104 switch & O₂ React Valve F/C 3 definitely bad. CIC looking into availability. Stopped @ this point on 2nd (DR #1). Walt said it looked like they could run 6, 7, 8, 9.

6-6-68 ① REPORT TO NORM CASSON ON FIRST FC REACTANCE VALVE FAILURE REQ'D. SHIFT W.D.M.

THIRD SHIFT 6-6-68

① FLUSH GOING OK PARTICLE COUNT OK NEED CHEM ANALYSIS

② 1518 WENT TO SEQ 06406 BECAUSE OF DR #1 ON REACTANT VALVE HAD SHORT PROBLEM FINDING CABLE DURING POWER DOWN. PICKED UP DR #2 ON O₂ METER SELECTOR SWITCH.

③ NO EFFORT ON 1090 BECAUSE OF 1518.

Jack.

② McClintock and Dornis ill - Martin in bed Feeling poor.

③ See OVERTIME SCHEDULE - WEEK-END WORK:

SC103 PROP - RETEST TPS - SAT & SUN. FCC - ~~No effort~~ Retest TPS^{Sat} PROP - 0131 Read through - Sat. SC104 PROP - RCS FLUSH - Prep #225 & 4128 Sat & Sun. as req'd. FCC - 1518 - Sat

SC103 Retest TPS's cannot be over emphasized.

④ Beaman: See where Manny Savala is being requested to be excused from Jury Duty.

⑤ Commencing Monday June 10, there will be an ATDV ~~1st~~ to 2nd shift turnover, at 16:10 to 16:30, similar to 3rd to 1st turnover at 07:40 - 08:00.

⑥ ATTENTION - This weekend there will be a AIR FORCE security check - pass the word on and lock-up job, if any, classified information.

6/6/68 ~~2nd~~ 2nd Shift DMR

Bill (1) Regarding replacement for Walt next week. Covered from Tues thru Sund (6-11 till 6-14) but will need man for Monday if 1518 & 1090 are both going simultaneously. If only one going will be ok.

Bill -> (2) Need Skills Index & Employee Profile form for A. O'Connell - he never got forms on 1st shift - see enclosure

(3) TPS in work on SPS Heater c/o

(4) Flushing & Purging open still going - pulling vacuum most of evening to dry out system.

(5) 1518 started in seq 026 @ start of shift & ran good most of night. Wrote at 032 by 2300 hrs. Picked up DR & are T/S @ 2300 hrs

3RD SHIFT 6-7-68

(1) 1518 WIRE PROBLEM ON TERMINAL BOARD IN SEQ 032. NEWMAN CHECKING WIRE LIST FOR PROPER CONFIGURATION.

REACTANCE VALVE ON FLOOR FOR REPLACEMENT HAVE HELD IT UP BECAUSE WE FELT THAT ANOTHER WIRE CHECK SHOULD ^{PALEY} ^{OTTE} ^{NEWMAN} BE MADE. PER MEETING YESTERDAY AM, I HAVE NO NOTES CONCERNING THE DECISION TO CHANGE THE VALVE OR NOT. APPARENTLY THE DECISION WAS MADE. YES

(2) EFFORT CONTINUING TO DRY RCS WITH VACUUM.

(3) BILL MANHA - IF FCC PUT MORE THAN ONE OCP IN WORK AT THE SAME TIME THE THIRD SHIFT WILL NOT BE ABLE TO SUPPORT WITH OUT ADDITIONAL EXPERIENCED PEOPLE. THIS IS ALSO TRUE OF RCS SRS. IF M. SAVALA CAN NOT BE EXCUSED FROM JURY DUTY ANOTHER MAN MUST BE ASSIGNED TO THIRD SHIFT. PLEASE ^{CONSIDER} ~~THE~~ THE NUMBER OF PERSONNEL ON THIRD SHIFT WHEN MAKING COMMITMENTS TO SUPPORT MORE THAN ONE SYSTEM TEST AT A TIME. RIGHT!

(4) 104 BACK INTO FLUSH.

(5) 1518 FURTHER TROUBLE SHOOTING ON DR#1 AND DR#3. VALVE LOOKS BADER - DR#3 SCREWED UP WIRING TO TERMINAL BOARD.

6-7-68 ① Rhodewalt - Ref. 6/6/68 2nd entry
FIRST 1 - See 6-4-68 Days entry 1 -
NDM NO 1090 UNTIL POWERED-UP - EARLY
WEDNESDAY 6-12-68

② Rhodewalt - Refer to STE-GEN-803 SK 010. On first shift there are some, mixed, opinions about the conclusion that 200 ± 15 microns vacuum decay per 30 minutes is acceptable. Murphy says it has always been under 100 microns per 30 minutes, or less, and s/b now too. Marfin didn't say too much about it one way or another. Don, what was your source of information? You know Murphy wrote the initial TPS with lighter regints and TER really raised - that he wrote it. Could they be trying to give us something marginal?

③ Got word Huber has passed Quebec City and is on his way to Hall's fax!

④ SC103 - FCC retest TPS needs much work, between now and Monday. Newman volunteered to work Sunday on it.

⑤ Rhodewalt - See enclosed forms for O'Connell.

⑥ SC104 - 1518 DR#1 has been dispositioned to remove FC #3 Or valve and replace - OK but make sure wiring **DOES** **NOT** get hooked-up until S22 is fixed.

6/7/68 2nd DMR

(1) Ref Vacuum Decay - 1090 TPS STE-Gen 010 ✓
Reqmts per OCP are to pull down below 500 μ . Continue pumping for 2 hours, then isolate system for 30 minutes. In the isolated configuration system can not raise above 500 μ . During TPS rise in vacuum was ~~approx~~ approx 200 μ - this allows 300 μ pad for vehicle system which should be adequate. As noted this is all GSE - when s/c systems people are working on this type of effort they're not short changing their own jobs.

(2) Ref item #6 above - Yahn has suggested - & I think the idea has merit leaving Reactant Valve wiring unconnected till ready to test then disconnecting till ready to ship.

(3) F/C 104 De wiring reactant valves in prep for pulling.

(4) Problems on 104 engine milking. ~~impairing the~~ on FAIR Ticket + TPS what to stamp, etc. This is a poor show. This is manufact. effort + Techs - how do we constantly get involved? It should be either ATU or manufact. not both. The way was over last night questioning TPS because of validity of bench marks on floor etc.

(5) F/C T/S switched wires (DR 3?) prob corrected & retesting @ 2300 hrs
in DR

(6) 104 powered up again @ about 2200 hrs

3RD SHIFT 6-8-68

① 1518 IN HOLD WHILE POWER BEING CHANGED ALSO CHECKING ON PURGE AND LINE CUTTING REQUIREMENTS. TICKETS BEING PROCESSED NOW

② SAYALA IN TO SUPPORT SPS AND RCS.

6-8-68 ① Ref. 6-7-68 2nd item 4 - RIGHT, FIRST The manufacturing planning ref. to WDM a process specification which is inadequate and in some cases wrong. In the past - management's attitude "get the job done - however possible" got the TPS going - now a precedence has been established and Manf & Eng. won't correct their spec. - I don't they have the real "know-how". What should be done, is we should stand firm and not write a TPS - Make Manf & Eng. correct their procedures so they do work - and stand firm in spite of TPE direction.

② SC104 1518 Johnson in seq 36 expects to complete thru 43 today when 1518 will be put into a hold until capacitor

box will be available for 17-23 probably Monday.

③ MA0810-0049, RCS Dryness ^{New Repit} talked for J. Cuzzupoli who will get relief on SC103 and grease the skids for streamlining spec. so it is reasonable for subs.
W.R. Manha 6-8-68

6/8/68 DMR 2nd

- (1) Header c/o 104 just about complete. Flushing on 104 is according to Derbyshire just about done. What is general plot on 104 RCS - will they be resuming 4171?
- (2) 104 ~~power~~ powered down @ 2200 hrs
- (3) 103 robot according to CIC will start Wednesday @ earliest
- (4) F/C brayers did not show - reactant valves will be worked on tomorrow. TPE on 104 asked if they had any support - I said legally no, but there would be F/C types here if they got into jam on FAIR ticket for reactant valves. No running done this shift on 1418 - worked on resin time out of tolerances, but negative results - think its in SCAT049

3RD SHIFT 6-10-68

① 5018 IN HOLD WHILE VALVE BEING FOR ~~CHANGED~~ CAPACITOR FILTER INSTALLATION.

② RCS FLUSHING ~~NEW~~ COMPLETE NEARLY FINISHED DRYING. FINISHED CREW OF FANUSERS HAVE LEFT THE STACK.

③ PURGE ON REACTANT VALVE AND O₂ FLOW X-DUCLER. PURGE PUT ON SYSTEM SUB DR # 855901-B ITEM #17 STEP 17:12 PAGE 3 CONNECTING TO TP 66 & 67. PURGE STARTED @ 300 AM 3-9-68. TALKED TO D. NEWMAN WHO WAS HOME SICK AND HE INFORMED ME THAT SYSTEM WAS ELECTRICALLY SAFED BY C/B'S OUT.

6-10-68 ① Huber finished rally.

FIRST
OK

② Beaman - I got Manny Savala's Jury Duty summons out of his desk and gave toorraine.

③ SC103 Tyler is working TPS 039 CM RCS Sys. 1 contamination check - expect to complete this shift. ✓

④ SC103 - TPS ^{RCS, SPS} RETEST - 008 complete less signatures - copies to Harshbarger (Eng) and Crockett (NASA).

⑤ SC103 TPS RETEST - 011, by Marfin, is in work estimate completion by the end of this shift.

⑨ SC104 - 1518 - high pressure test (900 psia) is not being permitted by safety. Johnson and Cooke are evaluating impact. Cooke has the action to convince NASA test is not required.
1518 - holding - capacitor mod. is being worked; FC #3 O₂ reactant valve is being replaced. Cooke & Johnson are evaluating pressure retest on valve replacement.

⑩ SC104 - 4225 - Mc Clintock has been assigned to TC 4225, at least until Rivera returns. He is also investigating impact and plan to comply with MA 0210-0049 RCS Dryness Reqmt.

⑪ SC104 - 4128 - Dutton has been assigned to TC 4128, at least until Huber returns. O'Connell says he doesn't mind completing his second shift tour because he "gets broader experience and is forced" to produce. Dutton requested assistance - Cornwell has been requested to assist, at least until we get into OCP-0131-SC103.

⑫ SC103 - 4224 and RCS control box retest is being prepared by Shimizu.

⑬ SC103 - 4171 - Ken Ames is reviewing to verify it is a workable document, complies with pressure restrictions, and satisfies 4020 requirement.

⑭ SC103 - 4224 DR #11 Quad D engine D4 closed too fast - Steadman (eng.) is trying to get a waiver from requirement - may be a problem since test is a NASA pet, and has been such a problem in the past.

⑮ SC103 - TPS 039 - complete less DR69 - No level 1 cleanliness verification on O-rings installed under Burst disk covers. Shop is going to try to get necessary paper to prove cleanliness - if not we may have to purge for replacement.
H.O. Mark

2nd DMR
6/10/68

(1) F/C - no 1518, activity on 104
brackets showed up about 2330 hrs to
replace union.
Paul M. worked on 103 ~~to~~ TPS to go
into 1518 for retest.

(2) 4128 - in work tonight - pretest.
TRC from TER group presented but no
explanation on constraints - R. Bills spent
most of night trying to come up with explanation
on items. List not signed by myself or
SPS type.

3RD SHIFT 6-11-68 BEAMAN

① RELUCTANT VALVE BRAZED IN PLACE.
NEED XRAY BEFORE FINISHING HARDWARE
INSTALLATION. BALCHAK TRYING TO FIND
OUT ABOUT PURGE CONFIGURATION AND
ALSO MAKE CERTAIN WIRES ARE NOT
HOOKED UP.

I HAVE BEEN TRYING TO FIND OUT
WHAT THIS ELECTRICAL MOD FOR 1518
CONSISTS OF BUT HAVEN'T BEEN ABLE
TO GET ANY GOOD WORDS FROM ANY ONE.

104 HAS BEEN POWERED DOWN MOST
OF NIGHT ON A WIRE MR BEHIND
PANEL 4.

② 4128 IN WORK. PUT A NEW HIRE
ON JOB AND HAS PROBLEMS FINDING
CABLES.

③ PLEASE LEAVE WORD ON JURY SITUATION
FOR M. SAVALA.

④ NEWMAN WAS SICK LAST NIGHT IF HE
DOESN'T COME IN TONIGHT AND WE ARE
SCHEDULED FOR 1518 I WILL REQUIRE SOME
THIRD SHIFT COVERAGE.

⑤ NEED FCC TYPE TO GET WITH
EL'S PEOPLE TO FIT CHECK O₂ UMBILICAL
INTERFACE FIT CHECK. —

6-11-68 ① FOR ADDITIONAL FCC INFORMATION
FIRST FCC SC104 LOG IS KEPT IN
FRONT OF TOP DRAWER OF FILE
CABINET BEHIND JAN TURLEY'S
DESK OR ACE CONTROL ROOM WHEN
TESTING — SEE SC104 OCP 1518
PLAN. — ATTACHED TO PAGE 19.

② MANNY SAVALA IS EXCUSED FROM
JURY DUTY AND DOES NOT REQUIRE
TO APPEAR.

~~2nd DMR 6/12/68~~

~~(1) 1300 hrs 6/12/68 pretest power up S/C 103~~
~~(2) Security inspection tonight~~

③ SC103 - FCC - V37-GEN-DR 112 req'd
disposition - DORNIS supplied.

④ SC103 - RCS - TPS 033 - OPEN - DR SA
FOUND GOLD IN SYS 2 - ACTION TO
METS to get ANALYSIS RESULTS IN
DR. — LOOK CLOSE AT OPEN
ITEMS ON SC103!

PLAN OF ATTACK - OCP 1518 - 6-10-8

MCR 4474

56109

Yerko

- 1) WORK CAPACITOR MOD. - ~~Watt De Bruyn~~ has mod kit as soon as TB's are available FAIR ticket will be released with complete information.
- 2) GET C11-000 413 & 416. On stock
- 3) RUN SEQ 17 thru 23. (TVAR - RECONFIGURE SCAT-049 CABLING)
- 4) DETERMINE REASON FOR $\frac{1}{2}$ CORRECT AMBIGUOUS ϕ to ϕ PARALLEL FAN MOTOR RESISTANCES. TROUBLESHOOT IF REQ'D. GSE Prob.
- 5) RERUN ~~36-00~~ ³⁶⁻⁰⁰ thru 39 ~~thru 39~~
- 6) RUN 40 thru 43
- 7) COMPLETE V37 EPS DR 17 REACTANT VALVE REPLACEMENT.
- STOP! DECISION REQ'D ON PANEL 3 SW REPLACEMENT
- 8) RUN SEQ. 44 thru 49
- 9) TVAR PRESSURE CHK CHANGES ~~TO~~ DUE HIGH PRESSURE TEST DELETION
- 10) RUN 50 thru 57 (with TVAR's of Item 9)

2nd DMR
6/10/68

(1) F/C - no 1518, activity on 104
brackets showed up about 2330 hrs to
replace union.
Paul M. worked on 103 ~~TPS~~ TPS to go
into 1518 for retest.

(2) 4128 - in work tonight - pretest.
TRC from TER group presented but no
explanation on constraints - R. Bills spent
most of night trying to come up with explanation
on items. List not signed by myself or
SPS type.

3RD SHIFT 6-11-68 BEAMAN

① REACTANT VALVE BRAZED IN PLACE.
NEED XRAY BEFORE FINISHING HARDWARE
INSTALLATION. BULCHAK TRYING TO FIND
OUT ABOUT PURGE CONFIGURATION AND
ALSO MAKE CERTAIN WIRES ARE NOT
HOOKED UP.

I HAVE BEEN TRYING TO FIND OUT
WHAT THIS ELECTRICAL MOD FOR 1518
CONSISTS OF BUT HAVEN'T BEEN ABLE
TO GET ANY GOOD WORDS FROM ANY ONE.

104 HAS BEEN POWERED DOWN MOST
OF NIGHT ON A WIRE MR BEHIND
PANEL 4.

② 4128 IN WORK. PUT A NEW HIRE
ON JOB AND HAS PROBLEMS FINDING
CABLES.

③ PLEASE LEAVE WORD ON JURY SITUATION
FOR PA. SAVALA.

④ NEWMAN WAS SICK LAST NIGHT IF HE
DOESN'T COME IN TONIGHT AND WE ARE
SCHEDULED FOR 1518 I WILL REQUIRE SOME
THIRD SHIFT COVERAGE

⑤ NEED FCC TYPE TO GET WITH
ECS PEOPLE TO FIT CHECK O₂ UMBILICAL
INTERFACE FIT CHECK. —

6-11-68 ① FOR ADDITIONAL FCC INFORMATION
FIRST FCC SC104 LOG IS KEPT IN
FRONT OF TOP DRAWER OF FILE
CABINET BEHIND JAN TURLEY'S
DESK OR ACE CONTROL ROOM WHEN
TESTING — SEE SC104 OCP 1518
PLAN. — ATTACHED TO PAGE 17.

② MANNY SAVALA IS EXCUSED FROM
JURY DUTY AND DOES NOT REQUIRE
TO APPEAR.

~~2nd DMR 6/12/68~~

~~(1) 1300 HRS 6/12/68 ^{Pretest} power up S/C 103~~
~~(2) Security inspection tonight~~

③ SC103 - FCC - V37-GEN-DR 112, req'd
disposition - DORNIS supplied.

④ SC103 - RCS - TPS 033 - OPEN - DR SA
FOUND GOLD IN SYS 2 — ACTION TO
METS to get ANALYSIS RESULTS IN
DR. — LOOK CLOSE AT OPEN
ITEMS ON SC103!

6/11/68 DMR

- (1) P/C 104 Working DR#4 (wrong resistance values). Damp had verified s/c portion was good. Problem pinpointed to SCAT 049. A subdv will be written against it to T/S. TER on board this effort
- (2) 104 which had been powered down, made decision to go into a 5-6 day mod period so they will not power up. This action brought on by the P/C switch in panel 3 + 1115 problems.
- (3) 4123 (104) had most of pretest sold however came to complete halt when mod period news came thru.
- (4) T/S for Sect I & II of 4225 on floor but no work being done. Sect I was never started on day & ~~it was shut down~~ had no techs working it tonight.
- (4) This reportedly was venting to go into ~~Sect I~~ Sect II @ end of day shift however Alex O. checked book (impaired copy) & found only 4.2, 4.3 stamped off. Nothing had been hooked up. Someone's kidding people here.

WEDNESDAY 12 JUNE 1968.

- ① 4128 & 4225 SECTION I IN HOLD DUE TO MOD ON 104. HOOK UP ~~IS~~ NOT PERFORMED BECAUSE OF TIME ELEMENT BEFORE POWER UP.
- ② T BUCHAK WORKING DR TO RECONFIGURE FROM PUXOE HOOK UP TO TEST HOOK UP.
- ③ ^{RESTART} VALVE ELECTRICAL WIRE ROUTING IN WORK. _{Done}

- 6-12-68 ^{DMR} ① WORKING "OPERATING TEST TEAM FIRST CERTIFICATION". OBSERVED THAT WE DON'T HAVE RECORDS FOR FARR AND MASUMOTO. NEED (FOR MASUMOTO) EDUCATION & RELATED EXPERIENCE _____ Years SYSTEM TRAINING COURSES _____ OUT (See enclosure)
- Apollo C/O Cycles as STE and any other applicable information. A status of group has been made.
- ② SC104 - FCC & JOHNSON IS T/S PANEL 3 SWITCH PROBLEM - FOUND SWITCH OK - FOUND MISSWIRING AT VALVE TB BUT T/S NOT COMPLETE AND NO CONCLUSION.
 - ③ SC104 - FCC ^{SP} O₂ PRESSURE TESTS - LANEY NEEDED ASSISTANCE BUT DIDN'T REACH ANYONE UNTIL LATE IN THE SHIFT SO PREPARE TO SUPPORT O₂ VALVE PRESSURE TEST ON SECOND SHIFT. WHAT THE PROBLEM WAS I DON'T KNOW.

④ SC103 - 4128 - AN E.O. THAT CAME AS A RESULT OF 4128 RIN WAS ERRONEOUSLY CLASSIFIED AS CAT I ON A TRL - AND SEEMS TO BE HOLDING OCP OPEN - NEED DOWN GRADE TO CAT II.

⑤ SC103 - SPS - GEORGE JOHNSON REQUESTED A SPECIAL SPS HTR TEST ON A SHORT IL. THE REQUEST WAS DENIED AND SIGNED BY HUTCHINSON.

⑥ SC103, SC104, AND SUBS RCS - MA0210-0049 WAS CRITIQUED AND PASSED ON TO HUTCHINSON - HEADED TO OLSON FOR TEST SCHEDULE PROTECTION. MA0210-0049 CALLS FOR UNREASONABLY EXTENSIVE MOISTURE AND HYDROCARBON CHECKS.

~~4128, 4128 (not) protest?~~ no protest activity per J. Schneider

6/12/68

1) Ref item 4 above - looked up EO. It is enclosed (EO# 664729) - doesn't make any sense. It's an EO covering structural damage for C²FL.

2. Posted security notice on new cabinet. Please make sure there's nothing classified in cabinet

3. Alex O. will be in early tomorrow to attend safety lecture @ 12:00 P.M. will work thru 2000 hrs

(4) No propulsion activity (4224 protest +128 shutdown)

(5) F/c 104 spent good part of night writing for FAIR ticket for reactant valve wiring.

(6) CTC's on 103 sold the following

4224 DR 11
1518 DR 17, 18, 21

6-13-68 THIRD SHIFT BENMAN

① F/c 104 wiring in work most of shift

② RCS CONTROL BOX INSTALLED AND SOLD LESS ELECTRICAL HOOK UP.

③ I HAVE A SORE THROAT SO IF YOU DON'T SEE ME I WENT HOME EARLY.

④ NEWMAN WAS IN FOR A BIT BUT WENT HOME (STILL SICK)

⑤ HAD SOME 103 QUESTIONS ABOUT 1090. LET THEM KNOW THAT WE CAN NOT SUPPORT IT AT THIS TIME.

⑥ 0630 XRAY OF 104 REACTANT VALVE WIRING AT TB. IN WORK. SOME SPLICING HAS TO BE DONE. TWO BAD CONNECTIONS FROM XRAY.

⑦ TED BUCHANAN TO GET A COPY OF DORA 1518 STACK DR# COLOR CODE WIRES ON VALVE. FOR HUTCH AT 0730 MEETING

6-13-68 ACTION ITEM FROM NORM CASSON
 FIRST Determine what effect there would be
 in RSS and SPS OCP's if a
 slow meter gage leak detector
 had to be substituted for a
 water displacement leak detector.
 Due 10 A.M. 6-14-68.

See enclosure from 2nd

✓ (2) SC104 FC#3, O₂ Reactance valve -
 special report requested of Hutch-
 Why was the switch planned
 but was not the problem?
 Info- 1137-445010 wires arc suppression unit
 MD417-0010 - TB7
 ME 284-0289 - Reactance Valve.
 Bill Hutchinson has Gene Johnson's
 copy of SM wire list.

③ SC103 1510 DR4 - STARTED TO WRITE
 TVAR BUT FOUND SPECIAL INSTRUCTIONS
 6.18 WHICH STATES MASTER ALARM
 IS NORMAL AND GIVES THE STG
 THE AUTHORITY TO SAY OK OR
 DR IT.

④ THE FOLLOWING ATTENDED "TEST
 TEAM SAFETY CLASS":
 AMES, CORNWELL, DUTTON, HARRISON,
 SHIMIZU, TYLER, MURPHY, FARR,
 DORNIS? O'Connell

⑤ Over time for weekend - SC103
 retest and SC104 PREP FOR
 TEST - 1 MAN PER SHIFT
 PER SYSTEM, MINIMUM IS REQ'D.
 SEE OT SCHEDULE.

6/13/68 2nd Shift D. Rhodewalt

Were starting to do

(1) F/c 104 ~~DR~~ continuity check of
 replaced reactant valve - work
 stopped because too bad
 wires were found in harness.
 1st wire F/c #1 O₂ React valve
 2nd wire F/c #2 O₂ " "
 Subs DR # 33 & MR DR A85041-1
 now in work!

(2) Finley ran check on alternate leak detector -
 what he found sounds good if really true
 All-038 will not work because of Helium
 (3) Could not find DR log book for F/c, Cyro -
 both 103 & 104. All DR log books are
 supposed to stay in day shift supervisors
 office - you should have → F/c 103, 104,
 Prop 103, 104

Bill

Regarding DR 4 (1510) on 103 they could
 have told this on 2nd but M. Farr put
 some words in it today that stopped them cold.

6-14-68

① NEWMAN IS STILL SICK AND NOT
 GETTING MUCH BETTER WOULD LIKE
 ONE DAY SHIFTER TO COVER
 PART OF WEEKEND.

② BUCHAN & FRANK REGRETT WORKING ON
 REACT VALVE WIRES. DR PICKED UP ON
 SPLICES. TED PUTTING DETAILS IN
 BOOK.

③ HAD TROUBLE WITH PROP ENGINEERS TO
 TRAIN THEM IN SELLING CUR FOS. AGAINST
 SPECS

6-14-68

AFTER ALL THE EFFORT Q.C. SAID THEY COULDN'T BUY ONLY DAYS. TPE INFORMED.

6-14-68 ① ACTION of item 1 6-13-68 FIRST, COLD TRAP, A14-034 (PDU), RUBY FLOW METER (FISHER & PORTER), BUBBLE-O-METER, 11FC-0009, & SMD9-20302 WERE DISCUSSED - 11FC-0009 PISTON DISPLACEMENT TECHNIQUE RECOMMENDED.

② MANHA & MARTIN ATTENDED APOLO SAFETY CLASS.

③ SC104 O₂ VALVE VALVE POSITION INDICATOR SWITCH FOUND STUCK CLOSED.

6/14/68 2nd D. Rhoadault

(1) Check being run on H₂ Valve F/c for possible damage from 5/22 probs.

(2) Wrote letter to Hutch regarding SPS engine muffling procedure problems copy on Hutch's desk. Very Good

(3) wire cut too short on reactant valve (original replaced valve - Sub DR #33) another prob.

* No prop activity

Bill → * 5 need prop retest package - please

lot

leave out no ~~night~~ nights can get on board!!

None performed

6-15-68 THIRD SHIFT BEAMAN
① REACTANT VALVE WIRES. "BIG FLAP" ENTIRE PROBLEM PUT IN "COOLER THIS SHIFT PER "RAY LARSON"

② PROPULSION HARDLY ANYTHING GOING

③ 103 SOME DISTANCE AWAY FROM POWER UP. STILL DOING BUS ISOLATION. COOLING WAS ON AT 0300 AM.

6-15-68 ① SC103 - TYLER ^{PROP} (YESTERDAY) MADE SOME NASA FIRST REQUESTED CHANGES TO RETEST TPS - SHOULD BE SIGNED SOON.

② SC104 - PROP - NO RETEST - HAVE NOT PERFORMED ANY OCP'S YET.

③ SC104 - FCC - O₂ VALVE REPLACEMENT - A WIRE WAS NICKED (INSULATION ONLY). ENGINEERING'S FIRST CA WAS R & R. WE GOT THAT TURNED AROUND - PUT ON HEAT SHRINK SLEEVING USING REFLECTING SHIELD TO MINIMIZE HEAT FLOW INTO VALVE. APPROVED BY HUTCHINSON. NOT SO CERTAIN NOW - NEED MORE EVALUATION BY RESPONSIBLE AUTHORITY. JOHNSON & COOKE ARE WORKING ON IT - WILL GET WITH LARSON WITH THE DETAILS.

6/15/68 2nd D. Rhodewalt

(1) F/C (103) - Got words on that station call for 1090 was 1800 hrs. F/c would poorly prepared for this. M. Farr found an OCP & put it in 3 ring binder - NO TVAR's, NO realises will do our best - will stroke with Paul tonight. I've tried for the past 3 nights to find out when this would be run. Of course Pandey has wanted to run it for 3 weeks. I hope we've got all upstream looking out of way but don't really know -

(2) Prop-(103) retest. TPS still tied up in NBSA RASP however - this TPS or copies should have been circulated on 2nd & 3rd. They sat here for 2-3 days with little or nothing to do & could have been reviewing or at the least getting familiar with it. 2nd saw it for the 1st time tonight - please communicate! Finley trying to break it out of RASPs to work pretest tonight.

(3) 1090 finished most of pretest. 9.7A still open + 8.1. Paul trying to sell 8.1 @ end/shift don't know whether he had time line connecting to

103 → (4) Found oil in H₂ Valve Box in "H₂ Fuel Vent" to Facility"

Being inspected by TOR @ 2300 hrs

6-17-68 THIRD SHIFT BEAMAN
 (1) 1090 ¹⁰³ IN HOLD FOR GSE CABLE 2557 AND POWER UP. PANEL II IS OUT PANEL 226 IS BACK IN.
 (2) NOTHING ELSE.

6-17-68-1ST

1. BOY! YOU GUYS HAVE BEEN MILKING IT. I EXPECTED IT TO BE SHIPPED BY THIS TIME.
2. SC 103 PROP. (RCS & SPS) RETEST WILL BE PER OCP GEN. TPS COB. THIS IS SIGNED & RELEASED. PLEASE HAVE YOUR PEOPLE REVIEW IT & PREPARE TO RUN IT.
3. SC 103 FCC RETEST WILL BE PER THREE TPS'S (i.e., TPS 011, TPS 015 & TPS — not written).
- * TPS 011 & 015 SIGNED BUT 011 WILL REQUIRE A MOD. SHEET (YAHN WORKING ON MOD.).
4. PLOT IS TO RUN TPS'S & OCP 1090 LARGELY IN PARALLEL. WHEN A CONFLICT EXISTS THE RETEST TPS'S SHOULD TAKE PRECEDENCE SINCE THEY MIGHT REQUIRE PNL. REMOVAL.

6/17/68 2nd D. Rhodewalt

- (1) Yahn working item #3 & reviewing TPS's
- (2) Masamoto working TVAR's (signatures etc on 1090)
- (3) Prop. - reviewing retest TVAR DOB note - what about retest on panel #3?

F/C → C14-397 - TPS written without checking schematic of this unit.

6-18-68 THIRD SHIFT BEAMAN

- ① CABLE 2557 HAS BEEN REPAIRED AND INSTALLED SUB DR'S SOLD
- ② 103 POWER UP DELAYED BECAUSE OF SOCKET ~~HAS~~ DROPPED BEHIND PANEL 1
- ③ 104 POWER UP DELAYED BY SWITCH CHANGE ON PANEL 2. M.A. SWITCH SPRING FELL OUT WHEN ACTIVATED.
- ④ 103 ZAP PANEL 1 CAME DOWN TO LOOK FOR LOST SOCKET. FOUND TWO 55 PIN CONNECTORS BROKEN.

6/18/68-HUBER

1. NOT MUCH TO TURN OVER. NEITHER S/C HAS PUR. UP. PNL'S OUT & MUCHO BROKEN CONNECTORS IN S/C 103. NEITHER S/C WILL PROBABLY BE ABLE TO PUR. UP FOR AT LEAST ANOTHER 2 DAYS.
2. JIM MARTIN IS COMPLETING 103 FCC RETEST TPS'S.
3. FIC PLOT ON 103 IS TO GET INTO OLP 1090 AS SOON AS PUR. ON. GIVE 1090 PRIORITY OVER FCC RETEST TPS'S.
4. DON: YOUR QUES. ITEM (3). PNL# 3 (S/C 103) IS NOT SCHEDULED TO BE ELEC. DEMATED. NO RETEST PLANNED.

6/18/68 DMR 2nd

- ① Bill - understand Finley's ~~pl~~ 3 week vacation ~~with Steve C.~~ filling in. Vacation = 7-1-68 till 7-22-68
Tom will work Sat + Sun.
Alex would like this weekend off (anticipates it will ~~be~~ be slow). Can we get lot shift coverage if 2 people are req'd?

- ② Tom, Walt, Paul attended system safety course this shift

3RD SHIFT 6-19-68 J. BEAMAN

- ① B. Duley, NOT IN. WILL HAVE TO SEE HIM TONIGHT TO GET THIS ATP SUNDAY COVERAGE. UNDERSTAND FROM BILL SHAW THAT RANDY TAKES CARE OF HIS ATP'S.

- ② TOOK TOUR OF FACILITY PLUMBING WITH D. NEWMAN.

- ③ GOING HOME EARLY DO NOT FEEL TO GOOD. KEPT ENGINEERS AWAY FROM PANEL PUNCHING.

6/19/68-HUBER

1. STILL IN MOD. PERIOD.
2. DON: PLEASE HAVE YAHU GET WITH LORRAINE IMMEDIATELY ^{TODAY} ABOUT EXPENSE ACCT. ✓
3. JACK: PLEASE HAVE NEWMAN GET WITH LORRAINE TOMORROW AM ABOUT EXPENSE ACCT. ✓
4. LEFT EARLY TO TRADE IN WORN OUT CAR.

Bill - Holding vacation notice - do you concure?

6/20/68 2nd J. Rhodewalt

Bill
Action →

(1) Please answer item 1, Page 127. Holding vacation request (Fitzlago) till I hear from you.

6-20-68 THIRD SHIFT BEAMAN

① TRYING TO POWER UP.

BUS ISOLATION TPS 018 STARTED AT 0100

- 10060 10030 ETC.

OCP 1090 WHEN POWER ON

TPS 019 GIMBAL MOTORS RE TEST NEXT.

6/20/68-HUBER

1. WEEKEND O.T. SHEET ENCLOSED.

JACK: FARR WILL BE ON 3RD SHIFT (STARTING SUN.) TO SUPPORT OCP 1518-SC 104.

2. S/C 103 TIED UP WITH BUS ISOLATION ALL DAY. PWR. UP SCHEDULED FOR THIS EVENING. FCC PLOT IS TO GET INTO 1090. PROP. PLOT IS 4224 PERUN.

3. S/C 104 PWR. UP SCHEDULED FOR 5 PM FRI. PLOT WILL BE TO GET BACK INTO 1518.

6/21/68 2nd JMRhodewalt

(1) F/c expense account -

(a) Paul M. turned check in with account - this was forwarded to Lorraine's desk.

(b) Walt W. letter (another one) typed out & will be forwarded to Diane for Noun's signature.

2. Propulsion Area -
PROBLEM

Please have 1st shift (Harrison) ~~from cranking~~ stop cranking out TPS's to support manufacturing efforts - or get him here on 2nd to sell the paper. They have a fair ticket out to change dynatube on hose Assy on the RC/system 104. This had no purge etc. to keep ~~open~~ system clean during burning. This should be pointed out to manufacturing + engineering rather than cranking out a TPS to correct their deficiencies. I do not writing, warning, or selling this type of TPS on this shift. As pointed out before when this is done we completely shut Eng out of the system - this has occurred in header C/O of the famous Mulling procedure - instead of going to eng for problems on the eng. oper. they come to ATO - lets keep eng in picture & get them to change procedure etc. rather than continuously ~~cranking~~ cranking them.

Rhodewalt

Paul moulton -

We held the line tonight when everyone (stack, manuf. c/c) insisted we needed another TPS for more purging & would you believe they went to planner & got the ticket changed?

Rhodewalt

3RD SHIFT 6-21-68 BEAMAN

① TRYING ALL NIGHT TO GET POWER ON TO GET 1090 GOING

② POWER ON AT 0600 ON DC BASES
AC POWER IN WORK AT 0630

③ DISCUSSED INFO WITH BERG.

6-21-68

- (4) NEWMAN TO SEE LORRAINE THIS AM. WITH CHECK BOOK.

6/21/68-HUDER

1. WE ARE RUNNING IN OCP 1090. WERE ABLE TO PULL SATIS. VACUUM. SHOULD SERVICE SHORTLY.
2. DISCOVERED THAT "SOMEONE" PLAYED WITH SK-2D-176 (BLUE GOOSE) & ASSOCIATED TEST KITS BETWEEN WED. AM. & TODAY. THEY OPENED THE VALVES TO THE S/C & PULLED A VACUUM ON THE S/C. THIS COULD HAVE BEEN ^(NOT WAS NOT) A FATAL TO THE WIG BLADDERS. PLEASE QUIZ OUR PEOPLE & TER TYPES ON YOUR SHIFTS & LET ME KNOW HOW IT HAPPENED.
3. DON: DISCUSSED YOUR NOTE 2 (PROP. PROBLEM) WITH HUTCH. HE FELT IT WAS APPROPRIATE FOR US TO WRITE THESE TPS'S. SAID HE WOULD CHECK WITH NORM. & HAVE A POLICY ISSUED.
4. PROP. TPS ¹⁰³ 8 (PUL. RETEST) SCHED. FOR 8 AM TOMORROW.
5. ECC PNL. RETEST TPS'S NOT SCHED. TIL TOMORROW. FINISH 1090.

6/21/68 2nd D. Rhoadeswalt

- (1) F/C 103
w/g fill completed @ 1700 hrs - proceeding with sampling, etc. Samples taken in seq 07-023 @ 2330 hrs

(2) Finley went home sick last night & called in sick tonight (flu). Since Alex will be out of town this could be a problem tomorrow night.
Bill → ~~Don't you call Tom~~ ~~afternoon~~
→ I'll call Tom early & let you know if he can't make it

103 (3) DR S4 continuation sheets in to type - 3/6 completed this shift.

(4) Contacted by Banders regarding running of TPS 8 (103 vessel) RES/SPS. He wanted to run it tonight, although its not sched till Sunday. Told him if wanted to run & could support, it fine. Started to run it about 2230 hrs.

TPS was running good @ 2330 hrs.

(5) Bill-Jack: Will be in tomorrow - will work Sunday.

(6) Bill. checked TER + STC's on 2nd - both knew of no activity in regard to SK-2D-176.

THIRD SHIFT 6-21-68.

(1) 1090 RUNNING IN SEQ 08 COMPRESSIBILITY OK. # SLIGHT HOLD FOR BEAKERS.

(2) TPS 8 RUNNING GOOD SO FAR. NOT

THIRD SHIFT 6-22-68 BEAMAN.
MUCH LEFT

6/22/68-HUBER

1. PLEASE NOTE ENCLOSED SHEET WITH INFO. I NEED TO COMPLETE CERTIFICATION SHEETS. I USED THIS INFO. URGENTLY. PLEASE HAVE THEM HUNT LONG & HARD FOR COURSE COMPLETION CARDS SINCE "NO CARD" MEANS "DIDN'T GO".
2. OCP 1090 COMPLETED TO THE POINT WHERE WE ARE RUNNING COMPRESSIBILITY CHECKS & TAKING W/G SAMPLES. WE CAN RUN THE PNL. RETEST TPS'S IN PARALLEL WITH REST OF 1090. IF 1090 & TPS'S BOTH GOING ON 103 WHEN 104 PURS. UP & IS READY FOR 1518 WE WILL HAVE TO SHUT OFF 103 PNL. RETEST ACTIVITY TO SUPPORT 104. (I.E., CONTINUE TO RUN 1090-S/C 103 & SHUT DOWN 103 FCC TPS'S IF READ. TO SUPPORT 1518-104).
3. ~~OCP~~ S/C 104 NOT YET POWERED UP - ANOTHER BROKEN CONNECTOR. OCP 1518-SC 104 CURRENTLY SCHEDULED FOR 1400 HRS. SUNDAY.

THIRD SHIFT - 6-23-68 BEAMAN

- 103 ① 1090 WAS PUT IN HOLD AT MIDNIGHT. WE WERE ABOUT TO PUT TPS 11 ON THE AIR BUT IT CONFLICTED WITH 1036 TPS RE TEST. PUT TPS 15 HOOK UP IN WORK FOR FIRST FOUR STEPS. THEN SHOULD DO TPS ON TO BE CERTAIN PNL #2 IS OK BEFORE PROCEEDING IN TPS 15 & 23. D. NEWMAN CHECKED DATA ON LOOP TWO 1090 AND IT LOOKED LIKE READINGS WERE OUT. .002 REQUIRED
- 104 ② J. BERG FOLLOWING REBRAZING ACTIVITY. TOLD TECHS NOT TO HOOK UP TO ENGINES UNTIL X-RAYS OK'D. MPTS DID NOT HAVE SUPPORT THIS SHIFT IN RCS WORLD. J. HAMMONS KNOWS ABOUT IT.
- 104 ③ NO POWER THIS SHIFT. TOOK SCAT 066 FROM 2B STACK TO SUPPORT TPS 015 103.
- ④ DR #10 FOR 4224 IN HOLD FOR 1036 ESTIMATED COMPLETION NOON.
- 6/23/68
1. PLEASE COMPLETE ENCLOSED SHEET.
 2. OCP 1090 COMPLETE EXCEPT FOR SHUTDOWN. SHOULD GET INTO FCC PNL. RETEST TPS'S ON 103 THIS AFTERNOON. OCP 4224 RERUN SHOULD ALSO START THIS AFTERNOON.
 3. S/C 104 NOT POWERED UP YET. PROBABLY WON'T GET INTO 1518 UNTIL TOMORROW OR DAYS.

6/23/68 2nd D. Rhodewalt

(1) F/C all effort tonight on s/c 103

Completed TPS #011 base M/A DR's & DR

on C14-397

This DR written because "push to test" circuit on C14-397 does a lot of other things beside test files. TER contacted - calling designer in to work problem. (This could constrain & interrupt)

TPS 015 starting @ 2100 hrs

Run into DR22 on step 17 NO BARBER POLE

Prob. resolved - was C14-397 configuration - where!

2. Prop - Trying to clear DR #10 on 4224. Mixup here on retest Matrix. Days had configured per Matrix however 2nd shift did not agree with plot. Called Manha & after going over plot with him he agreed with 2nd shift. This will require reconfiguration & a probable loss of 1-2 hrs.

Due to installation of RCS control box it is also now necessary to rerun seq 03 (4224) header c/o.

Running good - got really started into test @ 2200 hrs.

Bill → (3) Passed word along re schooling certificate.

6-24-68 THIRD SHIFT BERMAN

103 (1) D. NEWMAN RUNNING TPS 15 BUT COULD ONLY GO PART WAY BECAUSE IT ~~USE~~ REQUIRES STABLE BUS POWER. HE WAS ABLE TO SWITCH TO TPS 23 AND IS PROCEEDING PRETTY WELL. THE BUS POWER PROBLEM WAS CAUSED BY 1036 & 4224

104 STILL NO POWER UP STILL IN BUS ISOLATION. POWER MAY BE TODAY.

Shut down all vehicle power

101 BILL ^FARR CHECKED 1518 HOOR UP AND STATED EVERYTHING WAS IN CONFIGURATION

103 PROPELLION PROCEEDING PRETTY WELL IN DR #10. THEY WERE AT STEP 02-26 OF 4224 AT 0615. WE GAVE STACK A COPY OF DR 54 CONFIGURATION SO THEY COULD GET THE EQUIPMENT READY.

I WILL HAVE TO GO HOME EARLY TO SEND MY GIRL TO SUMMER CAMP.

IS SECTION

I OF OCP

1518 FOR

SC 104

VERIFIED

NO

6/24/68-HUBER

1. I STILL NEED INFO. ON CLASSES FOR CERT. SHEETS FROM YAHN, FINLEY, O'CONNELL & BOCHAK.
2. DON: MY RECORDS SHOW THAT WE NEED PERFORMANCE APPRAISAL SHEETS FOR MASUMOTO, YAHN, FINLEY & O'CONNELL. PLEASE LET ME HAVE A COPY FOR TOTAL GROUP FILE.
3. PLEASE NOTE INCLUDED SHEET SHOWING SHIFT ASSIGNMENTS FOR 0131-SC103 & 4128-SC104
4. FCC TPS'S 23 & 15 ARE ONLY CONSTRAINTS TO PUR. DOWN OF 103 PRIOR TO 0131. PLOT 15 TO RERUN TPS 23 PORTION PER MOD. SHEET & THEN RUN TPS 15. WATCH THESE CLOSELY.
5. OLP 4224 RERUN NOW SHUTTING DOWN.
6. "GOLD" TPS (DR 54) NOT A CONSTRAINT TO 031.
7. OLP 1518-SC104 CAN'T START UNTIL OLP 1115 RERUN COMPLETE THRU SEQ. 19. PROBABLY WED.

6/24/68 2nd DMR

(1) Item #1 above - see enclosure.

MR action

(2) Propulsion - started to set up to run DR 54. Found TP 19 bent 4° & some burred threads. Plot @ 2000 hrs was to reconfigure into another test part & keep on running. M&TS going to put words on MR that will allow us to continue to run DR as written. MR will delay effort till late 2nd or early 3rd.

PLEASE
RETURN
SAVALA'S &
YAHN'S
ACE CARDS

(3) F/c TPS 23 finished early this shift. Started TPS 15 but went into an ACE hold early.

3RD SHIFT BEAMAW 6-25-68

- ① NEWMAN & SAVALA WISH TO GO BACK ON FIRST SHIFT ON 1 AUGUST. FOR SURE
- 103 ② WERE ASSURED OF STABLE BUS B POWER SO WENT INTO TPS 015 AT 0345. PROCEEDED TO THE POINT OF CONNECTING LN2 WHEN MOMENTARY LOSS OF FACILITY POWER FORCED 103 TO MAKE AN EMERGENCY POWER DOWN.
- 103 ③ REFERENCE 2ND SHIFT NOTE 2 MR 119 CONCERNING TP 019. MR CAME OUT AND CALLED FOR CLEANING UP S/C COUPLING AND THEN BLOWING DOWN GROUND HALF COUPLING PER MA 0310-0034. THIS CONSISTS OF TAKING MILIPORE SAMPLES ETC. PER MR. WEATHERBY. AIRBORNE HALF BEING WORKED ON BY DRESSING TAREADS WITH VACUUM AND THEN FLUSH WITH FREON. EQUIPMENT TO DO BLOW DOWN BEING GATHERED BY STAK. STILL NEED FLOWMETER. CALLED BILL DEANE TO GET RELIEF FROM MR REQUIREMENT AND HE GAVE US SOME WORDS.

CAN DR#54 BE WORKED AROUND TP 19 PROBLEM.

SAVALA EXCUSED FROM VURY DUTY, SAVALA WILL WANT TO GO ON VACATION BY THE END OF JULY.

6/25/68 - HUBER

1. JACK: I WILL NOT ATTEMPT A DETAILED TURNOVER ON TP 19 PROB. PASSION & CUZZ. PREVAILED. WE REPLACED MATING GHC, TOSSED THE GREEN SMOCKS OFF THE STACK & CONTINUED WITH DR 54 (GOLD)
2. TPS 15 (PCC, S/C 103) RAN FAIRLY WELL ALL DAY. SHOULD BE COMPLETED ON 2ND.
3. PICKED UP DR 26 (OLD GEN RETEST DR.) DURING TPS 15. SEZ 100 PSIA IN O2 TK. 1 & WE DON'T KNOW HOW IT GOT THERE. WE PRES. TK. 2 NOT 1. PROBABLY LK. IN S/C CHK. VLV. OR IN POD TO TK. 1. I CONSIDER SATIS. RESOLUTION OF THIS DR A CONSTRAINT TO PUR. DOWN.
4. S/C 103 FIC W/G SAMPLE ANALYSIS NOT COMPLETE YET. PARTICLES PER TUB & EO. (MILLER WONT SIGN) O.K. BUT NO CHEM. ANALYSIS YET.
5. DR 54 (S/C 103 GOLD) IN HOLD ABOUT 4PM. LACKING BYNATURE FITTING. WE HAVE FITTING BUT IT REQS. CLEANING & PROB. WONT BE BACK 'TIL 1ST SHIFT TOMORROW. COMPLETION OF DR 54 NO CONSTRAINT TO PUR. DOWN. WE CAN RUN THE REMAINDER OF DR 54 W. PUR. OFF S/C.
6. S/C 103 O31 START NOW 1ST SHIFT THURSDAY.
7. STILL NO ACTIVITY ON S/C 104. CANT START 1518 OR 4128/4225 UNTIL OCP 115 COMPLETE THRU SEQ. 19.

DO AFTER TPS 15

6/25/68 2nd DMR

Bill - Lanky (finger tight) test kids showed up on this again

- (1) DR 54 in hold for parts - approx 3/4 performed back into test late 3rd shift. See note 5 Pg 138
- (2) Pretest on 4128 again in work. Mech hookup only had been done, now doing elect + GSE (O'Connell) @ 2100 hrs
- (3) TPS 15 completed, but had to go back into it later to rell several steps - Yahn misinterpreted step. Should be complete @ end / shift.
- (4) Contacted CIC in regard to starting 4225 - they requested we hold off on it because of other RE's activity
- (5) (104) TP 71 damaged threads - stuck sq #175 this is going the MR route
- (6) DR 26 - resolved early. According to Yahn the configuration on TPS 015 will simultaneously pressurize both tanks. Stripped data on this ~~it indicated the same thing & plotted it~~ in graph form & it indicated same thing. Data + graph is on J. West in a desk. DR 26 is sold to NR QC but needs Millers sig. + NASQC stamp
- (7) Bill - put copies of Finleys, Yahn's appraisal sheets in top drawer of your desk.

6-26-68 THIRD SHIFT BERMAN

103 ① TPS 15 STILL IN WORK

104 ② 4128 PRE TEST - NO ONE ^{ON STACK} ASSIGNED TO IT THIS SHIFT.104 ③ ^{BY FIRST SHIFT} DECISION MADE TO HOLD UP ALL OTHER TESTING UNTIL 1115 IS COMPLETED.103 ④ TPS 15 FINISHED TEST WISE BUT HAVING PROBLEM WITH RACO SEALS. EIGHT SEALS WERE AVAILABLE BUT ^{TPS 15} ~~THEY~~ ^{6 PK 23} WERE THE WRONG SIZE. STEP 97 OPEN FOR RACO SEALS.104 ⑤ 1115 IN HOLD FOR WIRE REPAIR UNTIL NEARLY 4 AM. THEN THEY HAD TO GO BACK AND CLEAR SOME DR'S THAT THEY HAD ~~BE~~ PICKED UP BECAUSE CONNECTOR P825 WAS NOT MATED.

103 ⑥ DR 54 IN HOLD ALL NIGHT AWAITING SPECIAL FITTING. BERG SUPPORTING 0131 PRE TEST.

104 ⑦ TP ~~71~~ 71 DR MR 175 ^{WORKED} ~~✓~~ DUST CAP DAMAGED PROBABLY CAUSE OF TP 71 PROBLEM.

6/26/68-HUBER

1. PROP. DR 54 COMPLETED EXCEPT FOR X-RAYING LINE, RECONNECTING (1) DYNATUBE FTG. TO ENGINE & PRES. SYS. W. 15 PSI. THIS CAN ALL BE DONE W. PUR. OFF. IF FOR SOME REASON THE DR IS NOT COMPLETED PRIOR TO 0131 - THE DYNATUBE LINE & MUST BE RECONNECTED & THE SYS. PRES. TO SUPPORT INTEG.
2. S/C 103 POWERING DOWN. 0131 SCHEDULED FOR TOMORROW.
3. S/C 103 FIC W/G SAMPLES ARE GOOD (PARTICLE & CHEMICAL).
4. STARTED INTO OCP 1518-SC104 AT 1400 HRS. OCP 1518 HAS #1 PRIORITY ON S/C 104.
5. OCP 4128-SC104 HAS #6 PRIORITY. DON'T KNOW WHEN IT WILL GET ON LINE.
6. JACK: TYLER WILL BE ON 3RD TOMORROW NITE (THURS. MIDNITE) TO SUPPORT 0131-103.
7. DON: DIDN'T GET TO RIVERA IN TIME. I'LL HAVE HIM ON 2ND FRI.
8. JACK: PLEASE HAVE NEUMAN LOOK AT 103 OCP 1518 DR'S 8, 15, 23 & 24 & SEE IF HE CAN DO ANYTHING.

15 LOCKED UP IN MARTINS

6/26/68 2nd D. Rhodewalt

(1) 103 - 1518 Power still on bird - had one hr hold for inspection then another pause for equipment. Yahu running

(2) 103 F/c DR's Had to call J. Martin for status on DR's.

Bill → Since they lost DR book, suggest getting another one

Please get systems people on duty to keep them in your office (per policy letter) so we know where they are. Made up another DR log - this shift - please update & keep in your office

(3) DR 54 completed early this shift

Bill (4) NASA is making rumbles on dielectric hoses on all GSE twins with vehicle on 2/103 Do all prop flex hoses really have dielectric portions (quick disconnects etc.)? Alex O. said he thinks so. Be Prepared

5 DR 26 (OCP) DR 26 (stuck) DR 23
1518 Sold this shift.

log book S/C 103 DR's in Hubers office
courtesy 2nd shift. Please review there!
DR - 23 Needs NASA

6-27-68 THIRD SHIFT BEAMAN

~~① 5054 RUNNING RAN IN TO PROBLEMS ON O₂ FLOW DR 10 - DIRECT O₂ VALVE WAS NOT CLOSED TIGHT SO FLOW CONTINUED.~~

~~② 5015 IN TROUBLE UNABLE TO GET TEMPERATURE CHANGES BECAUSE OF TEMP DROP ACROSS TRANSDUCER COLD PLATE. HAD HUY AND STOTEMAYER LOOK INTO HOOKING UP DOWNSTREAM OF COLD PLATE.~~

~~③~~

① DR #8 NEWMAN WORKING ON IT. NEEDS TVAR TO SELL DR.

② DR 16 IN MARTIN'S DESK

③ 1518 GOING 41-?

④ NEWMAN WANTS TO TALK TO YOU ABOUT GOING ON DAZE.

6/27/68-HUBER

1. OCP 1518-104 ON LIVE.
2. NO ACTIVITY YET ON 4128/4225-104.
3. TYLER ON 3RD TONITE & RIVERA ON 2ND TOMORROW NITE TO SUPPORT 0131-103. AMES WILL REPLACE FINLEY STARTING SAT.
4. WEEKEND O.T. SHEET ENCLOSED. SINCE HEADCOUNT = REQMTS. I PUT THE NAMES IN.
5. 103 STILL PREPPING FOR 0131. THERE ARE CURRENTLY 2 CAT.I CONSTRAINTS IN THE P/C AREA.
 - a. OCP 1518 DR 8 - NEEDS ENGR. SIGN ON TWR & THEN MILLER ON DR.
 - b. OCP 1518 DR 24 - MILLER SEE HE WANTS TO REVIEW RETEST TPS'S BEFORE SIGNING.
6. PICKED UP VSTGEN ^{S/C 103} DR 51 SAYING 1 REACTANT VLV. "LOOKS" BAD. ASKED HAMMONS TO GET ENGR. CIA ON THIS DR.

6/28/68

(1) Picked up tech + insp for 4128. Trying to clean up & stamp pretest items. Note to all Mechanical work has been done on configuration but work was not stamped off in book - We will have to repeat inspection this shift to try & buy it off.

Bill

(2) I repeat - please get DR log books in your office so we'll know where they are and what can be worked. Also get lead tapes to keep them up to date - especially Cyro.

(3) Considerable discussion @ start/shift on DR # 1518 (103). Apparently valve missed one side of Cyro Tk (O₂) Qty gauge. This plus open vents used in valve of replaced gage resulted in valve tonight. This is currently in work (2200 hrs) on continuation sheet DR 8

(4) 1518 104 @ say otk @ turnaround. Are taking Hoke samples of LN₂ this shift. Bill - on formal review Cyro OCP's you might suggest using hydrogen analyzer for this instead of Hoke bottle volume much faster.

(5) DR 8 valve performed ok this shift Completed @ 2300 hrs. Clayton signed DR 8 ~~Still need NASA PC.~~ Sold

6-29-68 BEAMAN THIRD SHIFT.

104 (1) 1518 HELD UP FOR A SPELL BECAUSE OF SAMPLE REPORTS. ALSO PICKED UP DR #8 AND NEWMAN CALLED MARTIN CONCERNING HEATER CHECK. I HAVE READ SOME SCREWY NOTES IN OCP'S AND THIS ONE IS IN SEQ 45 IS ABOUT THE ~~#~~ SICKEST.

104 (2) TRYING TO GET INTO 4128 BUT RAN INTO CABLE PROBLEM DURING CONFIGURATION.

104 (3) GREAT EFFORT TO SELL SECTION I. CABLE UP PROBLEMS HERE TOO.

104 (4) TPS 007 ALREADY TO GO. NO ONE TO REVIEW BERG. ^{VCS} ELECTRICAL CONFIDENCE CHECK.

104 (5) 4128 (0715) ALL HOOKED UP BUT NOT SIGNED OFF - NEEDS 10030.

6/28/68 HUBER

1. 0131-103 SHOULD BE GOING INTO SECT. II MOMENTARILY.
2. 1518-104 RUNNING WELL (ONLY TDR'S IN SEQ. 48. SEQS. 45 & 46 (O₂ TK. HTR. RES. C/D) WERE SKIPPED; STABLE BUS LOADS REQD. WILL HAVE TO RECYCLE & DO THEM.
3. 4128-104 ON STATION HOLDING FOR LACK OF TECHS/Q.C. PLEASE HAVE ALEX & MAURY SHIFT TO A 7PM → 7AM SHIFT TOMORROW.
4. WEEKEND AT. COPIES ENCLOSED.
5. PLEASE RETURN ENCLOSED RECEIPTS TO MASUMOTO/NEWMAN.
6. 1518-103 WAS POST TESTED & IS READY FOR T.I.

- 2751
7. PRES. DIFF. BETW. -343 GREASEGUN GAGE & S/C GAGES ATTRIBUTED TO 41" HEAD DIFF. (1040 DR'S 6, 7 & 8). WELL CIA & SELL THESE ON DAZE.
 8. WE HAVE TVARS TO DELETE HI. PRES. PORTIONS OF 1518-103 SEQS. 50 & 51. SEQ. 50 TVARS ARE SIGNED & READY. JOHNSON SHOULD HAVE SEQ. 51 TVARS COMPLETE BY END OF SHIFT.

6/29/68 2nd J. Rhodewalt

104 Bill → (1) TPS for fuel cell simulators - no turnover in this log but found out that Miller + eng. reviewing this. Also found out that you told Walt to scratch eng. signatures off TPS prior to publishing - please cease & desist on these types of orders. Walt Yahn would have been put in an extremely bad spot doing this. If you want to play these silly games on lat fine but leave 2nd shift alone. The TPS will be issued with the names on it who have reviewed it.

(2) ~~Glitch~~ Glitch on SP0003P on s/c 104. 15E T/S. ~~Did not pull connector P149~~ Did not pull connector (P149) trying to T/S prob using reflectometer. 4128 may close out Sect I this shift. Need to verify C14-075 cleanliness → about the only open item.

(3) 1518 (104) - At seq 048 in turnover. Picked up DR 9 @ 49-075 approx. T/S @ 2230 hrs. Putting of connector P149 will mean some retest for this OCP.

(4) TVARS ~~for~~ for seq 50, 51 up to control room signed off at 2200 hrs. (~~seq~~ 1518)

(5) TPS for simulator installation in review by J. Miller + Barra. Miller here @ 2400 hrs said he will review installation & sign that portion off. (over)

~~103~~

(5) Cont'd

Miller spent most of evening on TVAR for Seq 50, 51 (1518).

(6) F/C simulators in c/o BME area by TPS being done ~~by~~ by TER. I understand that they have some problems. Miller asking TER group for cross reference between Simulator TPS # 1510. Suspect Simulators will be in BME for awhile yet.

(7) Alex O. starting @ 1900 hrs tomorrow.

(8) Shift on SP0003 looks to be @ ~~P801~~ P801 @ C/m/s/m interface — this ~~is~~ determined from the reflectometer.

THIRD SHIFT 6-29-68 BEHMAN

104 (1) 1518 — BACK TO RE RUN SEQ 045, SMT TURNED THE WRONG VALVES (MV-1 $\frac{1}{2}$) A FEW TIMES AND HAD A SMALL LN₂ SPILL ALSO QUESTIONABLE IF LN₂ WAS IN TANK. PICKED UP DR 10 BECAUSE OF CONFIGURATION. RE RAN SEQ 045 OK AND THEN IN TO SEQ 046.

104 (2) 4128 — THIS MUST BE ABSOLUTELY THE WORST SHOW I HAVE EVER SEEN FOR AN OCP GETTING IN TO WORK.

(1) SECTION 1 NOT COMPLETED
8.7 TO VERIFY BLOWDOWN OF CSE.

(2) TRL FROM 6-5-68 SHOWED UP ON THIRD SHIFT WITH SEVERAL CAT 1s THAT NEEDED SELLING. ALSO A FARE TICKET CALLED OUT FOR SPS

THIRD SHIFT 6-29-68 BEHMAN

~~HEATER~~ HEATER WIRING. THIS TICKET WAS REALLY FOR TUNNEL RE WORK. JUST HOW IT BECAME A CAT 1 I'LL NEVER KNOW. HOWEVER, THESE WERE CONTINUAL FLAPS ALL NIGHT LONG.

103 (3) FINALLY GOT IN TO 0131.

6/29/68 - HUBER

1. SUGGEST YOU GET THE FACTS STRAIGHT BEFORE YOU MAKE INANE ENTRIES LIKE ITEM 1, 6/29/68. I CAN REMEMBER NO CONVERSATION I HAD WITH YAHU REGARDING F/C SIM. TPS.
2. PER CASSON'S DIRECTION ENGRG. SIGNATURE IS REQ'D. ON F/C INSTL. TPS.
3. 0131-103 GOING SLOWLY.
4. 4128-104 " " IN SEQ. 2 (LOW PRIORITY).
5. 1518-104 IN SEQ. 46 HUNG UP W. INSTR. PROB. (OPEN WIRE). SEQS. 47, 48 & 49 HAVE BEEN RUN. CURRENTLY 13 DR'S. WHEN SEQ. 46 COMPLETE GO TO SEQ. 50, ETC.

6/29/68 2nd D. Rhodenwalt

- (1) F/c 1518(104) in DR 13 @ turnover. Dornis completed DR - prob. resolved.
Seq 46 completed @ 1800 hrs. Going into TVAR on Seq 50, 51. Note - I downgraded Safety Shield item on TRL to cat III (lines pressurized only). Spent all this shift configuring & ~~re~~ running early portions of TVAR in stack.
- (2) SPS 4128(104) Going into Seq 03 @ 1800 hrs Running @ 04-087 2400 hrs - picked up DR on integrator out of tol. Manny said no sweat hope he's right. They are going on ahead. Note - spec does not agree with OCP in this area.
- (3) Prop 103 SPS connector sqk being massaged by Fleming (V37 #63) OCP #5. Words from Luman in TER group were that tube stem was not bent but throats dinged & poppet valve (s/c half) on QD was off center. Reworking ~~it~~ on MR DR @ 2300 hrs chasing throats etc. Will follow up, closely.

Bill (4) Enclosed is a DR NASA QC laid on us tonight. This and DR #1 (NASA) on reactant valve retest bear a slight tinge of engineering prodding. There was also a whisper of "proof pressures" on retest going around last night. This I'm sure was from engineering. Please establish firm retest policies during days so we can test without engineering requests, etc. on 2nd.

6/30/68-HUBER

1. 0131-103 GOING SLOWLY GETTING INTO NORMAL MISSION. GN₂ Q.D. (DR.6) SEEMS TO BE FUNCTIONING O.K.
2. 4128-104 COMPLETE THRU SEQ. 4. CURRENTLY IN SEQ. 7 (HTR. C10) WITH TER WIRING PROBLEM. GO BACK TO SEQ. 5 AFTER SEQ. 7.
3. OCP 1518-104 JUST COMPLETING SEQ. 51 TVARS. WILL THEN RUN SEQ. 52 & 53 (VAC-ION PUMP CHECKS) & THEN DEACT. SEQS. CURRENTLY 13 DR'S. ALMOST ALL DR'S HAVE CIA'S. MILLER HAS NOT BEEN IN OVER WEEKEND TO SELL DR'S.
4. JOHNSON IS GOING THRU F/C SIM. TPS W. COOKE. HE WILL SIGN FOR ENGRG. MILLER NOT IN TO SIGN FOR NASA. IF YOU COMPLETE 1518 SCREAM TO TPE'S & NASA PROJ. FOR NASA SIG. ON TPS. MILLER HAS HAD THIS TPS FOR OVER 2 WKS. NONE OF THE CURRENT DR'S WILL CONSTRAIN SIM. INSTL.

~~9-1-68~~

6/30/68 2nd D. Rhodewalt

(1) PO valve problems on 4128

(2) 1518 no work done tonight - no stable bus current. Worked DR's all shift

7-1-68 BEAMAN THIRD SHIFT

① 1518 BACK ON THE LINE TO RUN VAL ION CHECKS CTC ASSURES SUPPORT. HAVE HAD PROBLEMS WITH INSTRUMENTATION TROUBLE SHOOTING AND.

104 ② SPO03 INSTRUMENTATION PEOPLE SAY IT WILL HAVE TO BE REMOVED AND REPLACED BOTH THE XDULER AND SIGNAL CONDITIONER.

103 ③ SEQ 17 PROBLEMS POWERED DOWN AND BACK UP AGAIN FOR TROUBLE SHOOTING

104 ④ 4128 IN HOLD FOR 7070 - INSTRUMENTATION TROUBLE SHOOTING DR #8 SPO262 PULLING A COUPLE OF WIRES OUT OF P 904.

104 ⑤ BERG LOOKING INTO CONSEQUENCES OF CHANGING SPO03 XDULER. HE STATED THIS WOULD NOT BE A PROBLEM BECAUSE XDULER IS CHECKED OUT IN SEQ 08 OF 4128 AND THAT PROOF PRESS AND LEAK CHECKS ARE MADE IN TEST CELL.

7/1/68 - HUBER

1. SUBJECT: KEYS FOR FLUID/MECH. ENGRS. DESKS,

I'VE ASKED JAN TO GET A KEY FILE TOGETHER FOR ALL FLUID/MECH. DESK KEYS. THE FILE WILL BE KEPT IN JAN'S DESK & THE 4 OF US (JERRY, JACK, DON & I) WILL HAVE A KEY TO JAN'S DESK. JERRY CONCURS. SO THAT JAN DOESN'T GET A BUNCH OF DUPLICATES PLEASE LET ME KNOW ~~WHAT~~

WHOSE KEYS YOU CURRENTLY HAVE.
2. S/C 104 WILL NOT TEST THURS (4TH). WILL HAVE BABYSITTING CREW ON BOARD.

3. S/C 103 WILL TEST THURS. IF OIB1 NOT COMPLETE, THE FOLLOWING NAMES WILL BE ON THE HOLIDAY AUTHORIZ. LETTER IN CASE WE HAVE TO SUPPORT THURS:

1st - McClintock, Shimizu, Manha, Huber
2nd - Ames, Rivera, Rhodewalt
3rd - Berg, Tyler, Beaman.

4. OCP 1518-SC 104 COMPLETED & DR SELLOFF GOING SMOOTHLY.

5. F/C SIM. INSTL. TPS IN WORK. PLEASE FOLLOW THIS CLOSELY. #1 PRIORITY ON S/C 104.

6. OCP OIB1-SC 103 CONTINUING SLOWLY.

7. OCP 4128-SC 104 CONTINUING IN SEQ. 5. THE END OF SEQ. 6 IS CONSTRAINED BY OCP 7070, THE REST OF THE OCP CAN BE RUN NOW.

7/1/68 2nd D. Rhodewalt

Bill (1) Keys - Have keys for the following people
Please cross-reference with Jerry for
his people.

Finley
Scantlan
Lyons
Griggs
Yahn
Medanic
Tandy
Van Voorhis
Dutton
McGrath

(2) Fuel Cell Simulators - delivered to stack with ports unbagged and some to hand loose. Picked up contamination DR immediately. TER running hydrocarbons. Talked with Yahn - he said this S/D a level II system (M00610-017). Checked Jim Phillips on TER & they are back checking TPS on this. If no documentation they may have to also run particle counts (blowdown) Jack watch this. ~~They have not~~ Paul M. running prelim. steps on TPS till simulators are available clean.

(3) 4128 testing in seq 06-070 approx @ 2200 hrs
Had and cleared one DR caused by lack of R-starts in OCP

(4) 131 spent most of shift T/S Comm in seq 20.
DR #7 cleared. No open prop DR's in 0131 as of 2300 hrs

(5) 1518 (104) T/S DR 14 on vac-lon pumps. Yahn has problem cleared.

3RD SHIFT 7-2-68 BERMAN

102 4128 RAW ^{PART} SEQ 06 AND 08 AT 0200
BEING INTO HOLD UNTIL COOLING
ON.

103 FINISHED SEQ 020

104 TPS 025 BEING RUN BY BULCHAK.
NEEDED W/D SHEET ON PAGE 2 OF
TPS.

7/2/68-HUBER

- 0131-103 IN SEQ. 22 PROCEEDING SLOWLY.
- 4128-104 IN SEQ. 8. MUST FINISH SEQ. 8, RUN END OF SEQ. 6 (STEP 73 →) & SHORT RE-RUN OF BEGINNING OF SEQ. 8. DR'S CLAIMED AS MUCH AS POSSIBLE. WE'VE BEEN TRYING TO GET STAN HARVEY TO CONTROL RM. TO SIGN THEM OFF. RETEST ON DR'S NOT YET DEFINED BY ENGRG.
- F/C SIM. TPS IN WORK - 1ST SIM. READY TO GO IN. THIS IS THE HOTTEST ITEM ON S/C 104. PLEASE GIVE THIS YOUR PERSONAL ATTENTION & LEAVE NOTES. 1ST SHIFT QC WAS CONSIDERING A DR ON CORROSION OF THE F/C HOUSING. THEY RECONSIDERED (NO DR) & I HAD GORDON ENO (QC SUPV) PUT A NOTE IN QC SUPV. LOG SAYING DON'T SQK. WE FOUND OUT THAT H₂ & O₂ VLV. BOX CHK. ULUS REQ. 9.5 PSI TO PERMIT A PURGE.

7/2/68 2nd D. Rhodewalt

(1) F/C Simulator Installation-

TPS 025 updated with NASA MADS & ~~the~~ new copy back on stack @ 1800hrs. Have been working TPS all night with max (& good) support from everyone.

Purge on ok. Called in mockup man for turning up Xmas with F/C Sim #2.

Were making final connections to #2 @ 2200hrs. Note - all flares were inspected prior to using & all looked ok.

(2) 4128 in test all ~~night~~ shift. Were back in seq 06 - @ 072 @ 2300hrs. No problems. Alex did run for about 5 minutes with a locked in CRT (Vehicle power down & up on GSE) without realizing it - he was quite very surprised @ how steady readings were.

(3) 0131 ~~was~~ completed seq 023 @ approx 2200hrs. No SPS DR's or flaps.

7-3-68 BEHMAN THIRD SHIFT

① 4128 THEY HAVE GONE AS FAR AS THEY CAN GO UNTIL UNTIL SEQ 07 COMPLETE IN 2070

108 ② 0131 PICKED UP DR 48 EXCESSIVE TIME ON GIMBALL MOTORS. 11 MINS S/B 8.

TPS 25 ③ SIM NO. 3 IN POSITION AND BEING CONNECTED
104 PROBLEMS - TPS TO DISCONNECT A14-084
ALSO CONNECTOR 3" AWAY FROM MATING.

7/3/68-HUBER

DON!
THIS WILL
REQ. MOD. SH.
BASED ON
CONFIG. AT
TIME.

1. 104 WILL ~~BE~~ PWR. DOWN TONITE - NO WORK ON 4TH. JOHNSON HAS OUTLINED SUGGESTED F/C SIM. TPS DEACTIV. (TONITE) & REACTIV. (FRI. AM) TECHNIQUE IN F/C SYS. LOG.
2. WE HAVE HAD SOME M/A'S (DR. 16, OCP 15) DURING F/C SIM. INSTL. TPS APPARENTLY DO TO F/C ^{1&2} H₂ OR O₂ FLOW LOW LIMIT. SINCE FM NOT NEEDED IN TPS & TO AVOID CONSTANT M/A CONFUSION WE HAVE DISCONNECTED CONNECTORS TO F/C ^{1&2} H₂ & O₂ SIG. CONDITIONERS.
3. HOPE YOU HAVE PROP. TYPES SCHEDULED TO SUPPORT 031-107 TOMORROW. O.T. SHEET SHOWED 2 RECD. PER SHIFT.
4. OCP 4128-104 IS CURRENTLY T/ising OPEN DR'S W. ENGRG. AID SEQ. 06-07 TO END OF SEQ. 6 ^{HAS YET TO BE RUN} BEGINNING OR SEQ. 8 HAS TO BE RERUN DO TO FLANGE TEMP. DR.
5. LET'S HOLD TPS 007 (CM PCS WIRING VERIF. S/C 104) TO FRIDAY.
6. S/C 104 PWR. DOWN. I.L. ENCLOSED.
7. WEEKEND O.T. SHEET ENCLOSED, PLEASE FILL OUT.

O.T. AUTHORIZED
I.L. ENCLOSED

M/A - Caused by instrumentation
types in T/S. Resolved later in
shift. F/c clean

7/3/68 2nd D. Rhodewalt

(1) F/c Simulator installation - @ step 52 during turnover. Picked up 3 MR DR's on tubing dings in Xmas tree (one a possible R/R). Talked with Yahn & decided to keep on going in TPS rather than stop & work off these DR's at this time.

Had another M/A @ about 1916 hrs - not tied in with F/c activity but unexplained. Picked up another DR on an event light verification.

Work checked completed on both F/c simulators this shift. Picked up DR #17 on event light. This DR #17 was resolved by Walt. He also powered down & has power up steps on this DR (#17)

2. Bill - your weekend work activity does not agree with Published list. They have 104-2 prop types. Want with your list. - Ames, Rivers only scheduled for weekend. Hope 104 test doesn't go.

3. Prop (4128) in DR 14. Prob was not resolved this shift - they need SCS people to assist on this DR

Note - 4128 was powered down on this DR

(4) 0131 T/S in Seq 027. ~~no prop~~

3RD SHIFT July 4 BEAMAN

103 (1) OCP 0131 SEQ 27-23 THRU 27-118 THIS SHIFT
CIRCUIT INTERRUPTORS BLOWN.

103 (2) DR #58 WHEN ADJUSTING NIGHT SWITCH. BMAGS ARE TORQUED ENOUGH TO FIRE RCS JETS.

3RD SHIFT July 5 BEAMAN AGAIN

104 (1) POWER UP AT 0330.

104 (2) TPS 25 WORKED A DR's ~~SET~~ WHILE AWAITING POWER UP. NEWMAN GOING BACK INTO TPS PER DR #17 OF OCP 1518. ONE STACK DR'S CALLS FOR REMOVAL + REPLACEMENT OF NINE. HAVE HELD R/R AND UNTIL AFTER 1510. STACK OBTAINED COPIES OF 1510 OCP THIS SHIFT TO RUN SECTION I.

104 (3) J. BERG RUNNING TPS 007

104 (4) 4128 RUNNING DR 4 HOLDING FOR 2070. M. SAVALA.

103 (5) IN SEQ 29 CHECKING CIRCUIT INTERRUPTORS. TYLER LOOKING FOR PLUMBS TO SELL (NONE)

1 (6)

7/5/68-HUBER

1. OCP 031-103 S/B POWERING UP FOR PLUGS OUT ON 2ND SHIFT.
2. OCP 1090-103 (PORTIONS OF SEQ. 11 & 12 - SHIPPING PRESSURES, OCP SHUTDOWN, RACO SEAL INSTL) MUST BE COMPLETED ON S/C 103. TURB'S ARE ALL WRITTEN & TASK SHOULDN'T TAKE MORE THAN 4 HRS. WE HAVE DONE AS MUCH AS WE CAN W/O PLWR. ON S/C. DON: SUGGEST YOU HAVE PAUL WORK THIS.
3. OCP 4128-104 STATUS SAME AS WED. (I.E., SAME SEQ'S. YET TO BE RUN). CURRENTLY T/S'ing DR'S W. ENGRG. ASSISTANCE.
4. TPS 25 (S/C 104 F/C SIM. INSTL.) HAS PROGRESSED TO #1 F/C INSTALLED & READY FOR LEAK CHECK. CURRENTLY T/S'ing DR 60 (NO RDA. FR. F/C 10 O₂ PRES. XDUCER). THIS IS STILL THE HOTTEST ITEM ON S/C 104.
5. OCP 4225-104 IN PRE-TEST PREP. THIS CAN BE RUN NOW IF 4128 IN HOLD. NO CONFLICT W. 4128 SINCE 4128 HAS COMPLETED PNEUMATIC PORTIONS.
6. DON: ROGER ON YOUR NOTE #2. I CAN'T SEE WORKING EVERYONE 7 DAYS A WK. IF WE COVER ALL TASKS CALLED FOR THIS HAS TO BE DONE. ESPECIALLY YOU.

7/5/68 - 2nd D. Rhoden

(131)

- (1) No DR constraints to p/u for plugs out - per J. Crockett (turnover notes)
Powered up @ about 2030 hrs.
- Bill → (2) Affirmative action - counselled two employees.
Copy of results in my our middle desk drawer.
- (3) F/C 1090 Back into test (Seq 011) @ 2130 hrs had to write several TURB's but nothing serious (Masumoto)

F/C 1510 DR 60 Probs proved to be an open fuse - Interim conclusion written till fuse replaced & retest M/A problems showed up near end/shift

- (4) 4128 Working 2 DR's (4 & 2) did not resolve problem - had to give way to SCS people who were T/S 104 probs on 103 (SPS ~~the~~ Thrust On life) there is apparently a serious prob here (10 people including Larson at SCS console) that ~~also affects~~ overlaps into propulsion world. Not @ turnover was to work prob (SPS life) on 104 that was picked up on 103 - 104 found they had same problem.

- (5) 4225 to use an old cliché is in Sect I
- (6) 0131 in Seq 036 @ 2230 hrs (SPS Act.)

3RD SHIFT 7-6-68 DEWMAN

103 ① HAD ONLY NEWMAN ABOARD AND COULD NOT SUPPORT 1090 ~~MASUMOTO~~ MASUMOTO STAYED OVER UNTIL AFTER 0800 TO PRESSURE DOWN. A REALLY SCREWED UP OCP. MISSING SOME RACO SEALS SO CAPPED AND DOUBLE BAGGED LINES. TVAR ~~OPEN~~ ^{APP} TO WENT AROUND STEP. STEPS WILL HAVE TO BE SOLD WHEN SEALS ARE OBTAINED. STILL SOME OPEN STEPS SEQ 014 THAT POWER DOWN INSTRUMENTATION ETC.

104 ② NEWMAN WORKED DR 60 THEN BACK INTO TPS 25. PICKING UP DR'S ON WIRE HARNESES AND OTHER ROUTING.

104 ③ 4225 10030 CONFLICTS WITH 7070 1510 STILL WORKING SECTION I NO ONE TO PUSH IT.

103 ④ 0131 SPS TEST POINTS WERE ^{FOUND} CALLED WHEN RECONFIGURING IN SEQ 036. MK ACTION VERY GOOD HAD SPS ENGINEER R. THURMOND IN TO LOOK AT THEM. CORRECTIVE ACTION WAS TO CHASE THREADS AND GO, ALSO CHANGE GROUND HALF COUPLINGS. 0131 STILL TROUBLE SHOOTING DR 59 WITH TEMS UNIT.

7/6/68-HUBER

1. OCP 0131-103 BACK & RUNNING.
2. OCP 1090-103 COMPLETE EXCEPT FOR RACO SEALS. LET'S LEAVE THIS GO TO MON.
3. OCP 4128-104 T/S'ing ALL DAY WITH ENGRG. TYPES. SHUT DOWN T/S'ing ON 2ND & 3RD TO GET INTO 4225-104.
4. OCP 4225-104 SUPPOSEDLY READY TO GO EXCEPT FOR GSE ITEM OUT OF CALIB.
5. TPS 25 COMPLETED. NUMEROUS DR'S & PROBLEMS NONE OF WHICH CONSTRAIN OCP 1510-103. LET'S IGNORE T/S'ing DR'S UNTIL MON. WHEN ALL PIC TYPES ARE IN-DR'S CAN BE T/S IN PARALLEL WITH OCP 1510.
6. LET'S GET INTO OCP 1510 & RUN. SUPPOSEDLY SECT. I COMPLETE. ONLY CAT. I IS DR 66 (V37EPS) ON TWISTED F/C HARNESS (CIA DEPIN CONNECTOR & REROUTE).

7/6/68 2nd D.R. Kodelvatt

- (1) 104 problems @ shift turnover (Fuel Cell)
- (a) 1518 DR 6 Fuel Cell selector Switch (S10) on panel 3 has an internal ground. When F/c Rail Temp low transducer on F/c 3 is disconnected - every thing is ok. Run thru 1510 with this disconnected. Panel 3 problem will be fixed during mod period. Cat I to 1510 till disconnected.

(over)

(b) V37 EPS DR 60

F/C 1 Regulated press (O₂) not venting.
F9 fuse bad. Was Replaced then H₂ went
out. Will be solved prior to 1201
No constraint to 1510.

(c) 1518 DR 13 O₂ Tank 2 temp intermittent
could be connector, etc. TS with Reflectometer
No constraint to 1510

(d) 1518 DR 9

F/C 3 O₂ flow high with no flow conditions
No constraint to 1510

(e) twisted cable harness by simulators. Must
be corrected prior to 1510. Cat I
DR # not known. ~~TS~~ M&IS Action

(2) Plot for tonight - correct items (a) and
(e) & run 1510. Prefest supposed to be complete.

(3) Open items on Sect I of 1510 @ shift turnover
noted below
9, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

All the above para closed out on 2nd. TRL lists
2 Cat I's item e above

10030
3rd should have a clear shot @ Sect II

(4) Prop -

104 +225 prefest in good shape - all
closed out. Rivana went right into Sect II
Suffered from lack of inspect. Was at
01-034 @ 2330 hrs.

3RD SHIFT 7-7-68 BEAMAN

104 ① 1510 ON THE LINE AND PICKED UP
DR #1 IN SEQ 04. 0700 WIRE NOW
BEING REPAIRED.

104 ② 1510 REWORK HOLDING UP 4225 IN
SEQ 02.

103 ③ 0131 IN SEQ 04. THIRD SHIFT
RE-RAW SEQ 042. BECAUSE FLY AWAY
UMBILICAL NOT SEQUENCED PROPERLY.

7/7/68-HUBER

1. OCP 0131-103 IN SEQ. 47 & RUNNING WELL.
2. OCP 4225-104 IN SEQ. 2. LET'S KEEP
CHARGING IN 4225 & LEAVE 4128
TK'ing GO TO MON.
3. OCP 1510-104 JUST STARTING SEQ. 5.
CHARGE!

7/7/68 2nd D. Rhodan

(1) F/C 104 into seq 05 @ 1800 hrs - van into
DR 2 on F/C cannot life. Looks like the old M/A
prob is back F/C #1 life off others on (seq 05-010)

(2) 4225 running ok but requires CB 3, 4 off
when 1510 needs them closed

(3) 0131 in seq 048 @ turnover & running strong

@ seq 051 2400 hrs.

(4) Completed seq 05 1510 with 4 DR's -

DR#2 went away but could be problem others - not serious.

Ready to go into seq 06 @ 2400 hrs but

in hold P58 needs R/R (cracked back shell)

3RD SHIFT 7-8-68 BEAMAN

104 (1) 4225 TROUBLE SHOT FOR ABOUT 2 HOURS ON GSE CONNECTOR

104 (2) 1510 RAN IN TO TROUBLE ON VALVE BOX C/B. POP'S A C/B ON OVERLOAD TER CAN'T FIX IT SO GOING TO MANUALLY OVER RIDE ONE OF THE VALVES.

103 (3) 0131 IN SEQ 54 SKIPPED 33 BECAUSE OF A PASS CONNECTOR.

7/8/68-HUBER

1. DON/JACK: PLEASE LET ME HAVE GROUP LADDER COMMENTS BACK TOMORROW A.M.
2. OCP 031-103 JUST POWERING DOWN IN PLUGS OUT. WILL PUR. RIGHT BACK UP FOR T/S'ing. PLEASE HAVE ~~PROP.~~ PROP. TYPES T/S DRS. 72 & 73 WHEN PUR. COMES BACK UP. ONE IS ON DAD AIRBORNE THREADS (RESUBMIT TO MR IF NEC.) & THE OTHER IS ON UP & DOWN SPO600 N₂ PRES. SUGGEST YOU GET INSTR. HELP ON LATTER (STRIP DATA?).
3. OCP 4225-104 IN SEQ. 3. HAS BEEN SLOW GOING BECAUSE OF 1510 (CB 3 & 4) CONFLICT.
4. OCP 1510-104 IN HOLD MOST OF DAY FOR CONNECTOR P58 REPLACEMENT. NOW READY TO GO. ~~TER~~ WILL CONTINUE IN 1510 AS IS (i.e., T/AR IN MANUAL ULV. OPER - DR#6) UNTIL TER GET LARGER CB INSTALLED IN ULV. BOX PUR. SUPPLY.
5. HAVE BEEN T/S'ing. OPEN FCC DR'S IN PARALLEL WITH 1510. PLEASE CONTINUE TO DO SO.
6. CURRENT 1518, 137 EPS, 4225 & 4128 DR STATUS ENCLOSED. PLEASE LEAVE IN THIS BOOK.

7/8/68 2nd D. Rhodewalt

(1) 4225 Prop DR 4, 5 Bad leaks in RCS system - picked up about 1900 hrs. T/S on stack.

(2) 0131 Did no work on 72 & 73 this shift - Walt helping Alex on 4225 DR 4 & 5 leaks. Ken kept busy on retest could not leave station.

(3) 1510 Another wash (3 in row) of M/A. This time on #2 cond Temp. Solved prob by pulling O₂ flow connector on #2 F/C - this did not solve prob. but stopped M/A. Orig M/A tonight because of 175° on #2 cond Temp.

Bill → We need a task force on this M/A prob. There are many coked accumulators in this area - is it the simulator resistors or what?

Proceeded on in Oct in Seg 06. Prob. also on S14-113 Vsc pump. Regulator (G₂ in) not working - have to reg by hand valve.

Bill (4) I know this will come as a surprise. I agree with group ladder in its present ^{new} configuration. Will keep copy for my records.

7-9-68 3RD SHIFT BEAMAN

103 (1) DR # 72 NO DATA AVAILABLE PER D. RHOEWALT. NEED MORE INFO ON JUST WHAT HAPPENED WHEN TECH DEMATED THE QD. THE QUESTIONS RAISED ARE IN 103 PROP NOTE BOOK. INSTRUMENTATION DOESN'T FEEL THAT IT IS THEIR PROBLEM IF INSTRUMENT IS READING WHAT PRESSURES ARE REALLY IN THE BOTTLE. DR # 72 - THE SUP DR ON REWORK OF THREADS HAS BEEN WORKED. THE RE-TEST REQUIREMENT ~~IS~~ ^{OR IS} CALLS FOR 4074 CHECK OUT IN THE PIT. HOWEVER, IF THE DAMN THING LEAKS ^(OR IS) NOW SOMETHING SHOULD BE DONE TO FIX IT.

104 (2) 4225 FINALLY GOT DISPOSITION ON DYNA-TUBE FROM ENGINEERING. APPARENTLY, ENGINEERING HAS BEEN HAVING PROBLEMS WITH THESE PARTS AND WEATHERBY TALKED TO GIBBS ABOUT IT AND WANTED A LEAK CHECK WITHOUT AN "O" RING IN IT. MINUS PITCH ENGINE

104 (3) 1510 - NEWMAN WAS HIT BY BASE BALL AND COULDN'T GET IN. CALLED UP FARR AND HE HADN'T GONE TO BED YET SO WALT STAYED OVER FOR A COUPLE OF HOURS. FARR'S PHONE NUMBER 828-8907 (714)

104 (4) 4225 AFTER WORK ON DYNA-TUBE & BERG GOT READY TO LEAK CHECK AND FOUND THAT PROP ISO VALVES HAD BEEN OPENED IN 1086 - THIS IS A VERY SERIOUS PROBLEM TO HAVE BOTH OCP'S RUNNING IN PARALLEL.

(5) GOING HOME EARLY DON'T FEEL TOO GOOD. I HAVE TOMORROW OFF SO SAVALA WILL STAND IN FOR PROPULSION. PROBABLY NEED FARR AGAIN TOMORROW. UNDERSTAND D. NEWMAN HIT PRETTY HARD BY BEAN BALL SAVALA.

7/9/68-HUBER

1. JACK: FARR WAS ON 3RD SHIFT LAST NITE. I WANT HIM TO STAY THERE UNTIL 3 AUG, I PRESUME YOU'RE CONVERSATION WITH HIM LAST NITE WILL BRING HIM IN TONITE ON 3RD. AS SOON AS YOU COMPLETE THE ITEM WE DISCUSSED, SEND TED BACK TO 1ST - LET ME KNOW WHEN.
2. JACK: I PRESUME YOU'RE RETURNING THE GRP. LADDER W/O COMMENTS DENOTES CONCURRENCE, PLEASE LEAVE ME A NOTE.
3. REF. 7/8 NOTE 6. WHERE THE HELL ^{ARE} THE 1518 DR STATUS SHEETS. COME ON YOU GUYS!
4. OCP 031-103. DR 72 SOLD, DR 73 (QD LEAK) BEING ^{RE} WRITTEN AS V37 GEN DR & SUBMITTED TO MR. THIS SHOULD COMPLETE OUR ⁰³¹⁻ 103 PROP. EFFORT.
5. DON: PLEASE SEND RIVERA BACK TO DAZE SO I CAN TRAIN HIM AS A P/C TYPE.
6. JACK: SEND TYLER BACK.
7. OCP 4225 MOVED WELL TODAY.
8. OCP 1510-104 IN SEQ. 11. HAS MOVED FAIRLY WELL.
9. IT APPEARS THAT ^{S/C 104} FIC 3 O₂ REACTANT VLV. IS LEAKING INTERNALLY. REFER TO WRITEUP IN SYS. LOG. WILL PROBABLY MEAN R&RING O₂ REACT. VLV. PACKAGE. PLEASE BEGIN VLV. INTERNAL LEAK CHECK (USING BUBBLE MANOMETER) AS OUTLINED IN SYS. LOG.

FOUND IT
IN CONTROL
RM. 2.

10 more RR
5 & gear

7/10/68-HUBER

1. I FEEL LIKE I'M TALKING TO MYSELF.
2. JACK: FARR CAME IN ON DAZE TODAY. I'M SENDING HIM HOME EARLY TO COME IN ON 3RD TONITE.
3. JACK: PER OSBORN VIA HUTCH THE 5% CONSULTATIONS & LETTERS TO PERSONNEL FILE MUST BE COMPLETED TONITE. HAVE A BALL.
4. DR 54 (GOLD & GLASS BEADS) IN WORK ON S/C 103. CONTINUE ON 2ND & 3RD SHIFTS.
5. DON: RIVERA ON DAZE.
6. JACK: GET TYLER ON DAZE.
7. 4225-104 COMPLETE EXCEPT FOR SEQS. 6, 7 & 8. 2 DR'S OPEN; #5 (R&R ENGINE) & #10 (BAD TEMP. MEAS. - DON'T PUT THIS THERMOCOUPLE CHANGE INTO WORK YET; WE MIGHT HAVE TO CHANGE ASSOCIATED ENG. ALSO).
8. REACT. VLV. LK. CHECK (S/C 104) (DR 9, 1518) PROCEEDING SLOWLY. GIVE THIS NO. 1 FIC PRIORITY. ✓
9. PLEASE PUT ONE P/C TYPE ON DR 9 & HAVE THE OTHER WORK OPEN DR'S. (WE CAN'T AFFORD THE LUXURY OF 2 MEN ON 1 JOB).
10. CURRENT 104 FIC DR STATUS SHEETS ENCLOSED. IF THESE SHEETS AREN'T IN THIS BOOK TOMORROW I'LL STRANGLE SOMEONE.

1/20
0126

7/10/68 2nd D. Rhoads

(1) (104) new actuators will be installed on SPS engine - this per turnover meeting - apparently no one on lot ~~was~~ knew of this item till it was mentioned @ turnover. Actuators installed but not null'd this shift

(2) Sutters Mill operation (DR 54) in work on 103 & really making impressive strikes
Ken Ames working. Several particles found this shift
See note below

(3) 4225 (104) in work by Alex
Some test kit holds

(4) DR 9 1518 in work. Manometer test revealed little or no valve leakage - now looking into Flowmeter / signal conditioner

(5) Bill - DR status sheets on your desk.
Good inform. but ~~it's~~ the DR logs are where this belongs.

(6) Work on DR 54 stopped @ 2030 hrs due to DR 105 being given top priority - Huber, Bandeen, Seemuck in agreement on this @

Configuring for work on DR 105 @ 2130 hrs
DR 105 = Flow sensor v/s injector valve response.

Jack → Ames working on 2nd → Tyler on 3rd

ENGINE RUNNING

Would come thru on 2nd shift not to null engine till tomorrow. In second guessing, but if this means another TPS by Harrison please get it ~~cleaned up~~ cleaned up on lot because I'll refer them back to the Spec ± engineering on 2nd.

(7) DR 68 X-axis being replaced - was bad.

3RD SHIFT 7-11-68 BEAMAN

104 ① OCP 1510 NEWMAN & FARR & BECHAK WORKED DR'S. HELD 1510 FOR TWO REASONS.

1. DR'S SHOULD BE RUN BY MILLER BEFORE SHUT DOWN PARTICULARLY DR 1070 IN V37 BOOK.

2. 4225 HAD INSTRUMENTATION V/S PULLED

104 ② OCP 4225 LOST ABOUT 1.5 HOURS FOR TK OTHERWISE FAIRLY GOOD

104 ③ NOTE 1 PAGE 172. STACK WANTED TPS TO NULL ENGINE. I TOOK THE OLD POSITION OF NO TPS. PHIL OTTE CALLED HARRISON UNBEKNOWN TO ME AND BILL SAID TO RE ISSUE TPS. I HAD ALREADY TOLD OTTE THAT ENGINEERING SHOULD SUPPORT THIS EFFORT. NUTS ON ACTUATOR COULD NOT BE FOUND SO THEY WEREN'T READY FOR PAPER ANYWAY. I THINK A POLICY

SHOULD BE MADE CONCERNING THIS.
EITHER DO IT PER SPEC OR TICKET,
BECAUSE IT IS PART OF THE INSTALLATION.

103 (4) DR 104 RCS ENGINE REMOVAL HOOKED
UP FOR PURGE ON DR. BERG WORKING
THIS

103 (5) DR 105 MUCH RESISTANCE TO THIS.
SUPPOSEDLY A COMMON OCCURENCE, HOWEVER,
WANTED TO TRY AND REPRODUCE BEFORE
BREAKING SET UP. THIS DR CONFLICTS
WITH PURGE REQUIRED FOR DR 104. TOLD
TYLER THAT IF WE CAN'T REPRODUCE
THEN PUT A BAG OVER IT LIKE
SOME PEOPLE SUSPECT WAS THE CONFIGURATION.
SUGGESTIONS WERE TO TAKE FLOW
SENSOR TO BOME AND CHECK IT OUT.
BUT IF WE CAN'T PROVE A RESTRICTION
THEN WE ARE IN TROUBLE. ANYWAY
YOU SLICE THIS ONE IT WILL BE
ON OUR NECK.

7/11/68-HUBER

1. PER CASSON WE ARE TO SUPPLY
TPS'S TO SUPPORT ACTIVITY LIKE
GIMBAL ACTUATOR NULLING. I'M
NOT GOING TO ARGUE ABOUT THIS
SUBJECT ANY MORE, IF WE WRITE
A TPS ~~OR~~ I EXPECT YOU TO RUN IT,
IF WE (1ST SHIFT) ASK THAT YOU
GENERATE SUCH A TPS I EXPECT
YOU TO DO SO. IF THIS IS NOT DONE
SOMEONE WILL ANSWER TO CASSON.
2. WEEKEND O.T. SHEET ENCLOSED.
3. OCP 4225-104 COMPLETE. 3 DR'S OPEN (5, 10 & 11).
THERE IS NOTHING YOU CAN DO ON 2ND/3RD
SHIFT.
4. PROP. ACTIVITY TONITE:
 - a. S/C 103-GOLD DUST DR 54.
 - b. S/C 104-SUPPORT ACTUATOR NULLING
TPS U37 SPS #30.
5. OCP 1510-103 ~~SHUTTING DOWN~~ SHUTTING DOWN.
WHEN SHUTDOWN COMPLETE REMOVE
SIMULATORS PER TPS 25. NOTE: DR
ON REACTANT & CHECK VLU. INTERNAL
LEAK CHECKS HAS TO BE RUN
AFTER SIMULATORS ARE REMOVED
BUT BEFORE FLT. F/C INSTL.
6. OCP 1510 & 1518 & U37 SPS DR'S HAVE
BEEN REVIEWED FOR CONSTRAINTS
TO SIM. REMOVAL. NO. CONSTRAINTS.

7/11/68 J. Rhodewalt 2nd

(1) Ref. weekend O.T. K. Ames would like Sunday off. This leaves a slot to be filled on ~~Saturday~~ ^{Sunday} from days.

(2) Alex reviewing 0126

(3) DR 54 ran well all night till 2300 hrs then they ran out of millipore filters. In hold after that till 2400 hrs - just saw G make in way to stack @ that time

(4) F/C 2 simulators out - TPS 025 in the 180's (not working in sequence).

7-12-68 THIRD SHIFT BEAMAN

103 ① J. BERG WORKING DR ON GOLD HUNT. GOT STARTED LATE BECAUSE OF PAPER AND TECH TO READ COUNTS.

104 ② TPS TO NULL ACTUATORS COMPLETE.

104 ③ TPS 25 COMPLETE LESS 2 STEPS AWAITING SALE OF DR'S 55 & 56. STACK HAD INSPECTION START LOOKING BAY OVER FOR ITI. THEY FOUND A SMALL SCRATCH ON HONEY COMB DECK AND NEEDS SOME SPOT TIES. FARR WORKING TO SET UP FOR INTERNAL LEAK CHECK. G. JOHNSON⁽⁰⁴⁴⁵⁾ WAS CALLED AT HOME ON WHAT WAS REQUIRED FOR LEAK CHECK.

103 J. BERG HAD SOME QUESTION ON SEQUENCE OF OPERATION ON GOLD HUNT DR. WE TRIED TO CALL MCCLINTOCK BUT HIS PHONE NUMBER IS A BUM ONE. WE CALLED BILL MANHA AND HE SAID TO CONTINUE ON THE WAY THROUGH THE DR. SOME OPEN STEPS FROM SECOND SHIFT ON IT.

103 REQUEST WHAT RE-TEST PLOT WILL BE SCHEDULED FOR 103 @M RCS AFTER GOLD FIND.

104 LINE ON XMAS TREE REPLACED. PLEASE LET US KNOW RE-TEST REQUIREMENTS IF ANY. - ~~DR~~

103 DR 68 FLANGE TEMP INST RESEARCHING WIRE LIST. THEY HAVE FOUND THAT TWO OF SHIELD WIRES GO TO A CASE GROUND AND THEN TO VEHICLE GROUND. THEY NEED SOME ENGINEERING ASSISTANCE ON THIS.

7/12/68 - HUBER

1. COPIES OF WEEKEND O.T. ENCLOSED.
2. S/C 103 RETEST REQMTS. FOR R&R'D RCS ENGINES & SPS PNEU. NOT YET DEFINED. THERE WILL BE A CLB MTG. AT MEC TONITE TO DECIDE "DO IT IN DWNT." OR "DO AT KEC".
3. DR 54 NOW DR 212 (GOLD HUNT) IN WORK ON S/C 103. WE HAVE HAD TO INTERRUPT THIS PERIODICALLY SO THAT PURGE COULD BE SUPPLIED TO SUPPORT RES ENG. R&R. ENGINE R&R PURGE TAKES PRIORITY OVER GOLD HUNT.
4. MISSION GUELT TIMER ON S/C 103 PNL. 2 REPLACED W/O POLLING PNL. ELECTRICALLY (NO RETEST).
5. FCC TYPES WORKING REACTANT ULU. LEAK CHECK DR (THIS CONSTRAINS FLT. F/C INSTL.) & SELLING DR'S.
6. ONE LINE ON S/C 104 XMAS TREE REPLACED. I HAD DR WRITTEN TO SAY "NO PROOF TEST OF LINE" & DISPOSITIONED TO PROOF AT 1260 \pm 50 PSI FOR 5 MINS. & THEN CLEAN TO LEVEL II. SHOP WILL PULL THAT LINE FR. TREE & SEND TO B/I FOR PROOF & THEN TO CLEANING.
7. WORK ITEMS TONITE:
 - A. PROPULSION
 1. S/C 103 (PURGE FOR ENG. R&R & GOLD HUNT)
 2. S/C 104 (0126 PRE-TEST)
 - B. F/C'S
 1. REACT. ULU. LK. CHECK DR. (HOTTEST ITEM)
 2. SELL/WORK DR'S).

PLEASE FOLLOW

7/12/68 DMR 2nd

- F/C
- (1) Check with Yahn on Xmas tree line - make sure it was O₂ system
Check made - was O₂ line DR had no disposition on it. DR 95 V37 EPS
Was dispositioned by Yahn - proof of line was done on 3rd level / stack in protected area. Note - a new line (already clean) had been installed early on 2nd or late on 3RD on lot. No action to clean since DR did not mention ~~it~~ possible unverified cleanliness. 2nd found it installed & assumed it had been clean when installed.
Leak test on valves going well. All are tight so far. ~~Paul M. not in tonight~~
Paul M not in ~~tonight~~ tonight - could not work DR's.
 - (2) RCS 103
Two engines removed and one reinstalled so far - 2nd one will probably be completed by end / 3rd.
Gold hunt in progress but held at times due to purge for engine replacement.
 - (3) Wait for in Sat or Sunday. Please have lead types make good turnover.
 - (4) PAIR ticket around tonight on SPS Bull valve package (tot). This may be in work tomorrow.
103

Bill

7-13-68 THIRD SHIFT BEAMAN

103 ① MULLIGAN AROUND UNTIL AFTER 0400
R. BISHOP CAME IN TO RELIEVE HIM.
STILL PACKAGING FOR 3300

103 ② REVIEW AND REVIEW OF CAT I
CONSTRAINTS TO 3300 AND 5060.

106. ③ 104 POWERED DOWN COOLING
REMAINS ~~DUKE~~ WORKED ON 106
TEST POINT HARDWARE

103 ④ 0300 CALLED N. VOLLEY CONCERNING
FLIGHT BATTERIES FOR 5060.

104 ① POWERED DOWN BECAUSE OF
ARcing BEHIND PANEL #7.

103 ② ~~WAS~~ NOTHING DONE ON ~~THE~~ GOLD
FIND BECAUSE OF ENGINE INSTALLATION.
APPARENTLY SPECIAL CREW MECHANICAL
WENT HOME.

103 ③ BIB PUSH ON FOR 3300 & 5060.

I WON'T BE IN TONIGHT.
Jack

3RD SHIFT

① TVAR'S WRITTEN FOR SECTION I.

② FAIR TICKET MODIFIED FOR INSPECTION
AFTER REMOVAL.

③ BERG CALLED IN TO SUPPORT RCS
& SPS.

④ HELD UP ON MOISTURE AND HYDRO CARBON
OPERATION AWAITING TEST KITS. MCCLINTOCK
HAS THE WORD.

7/15/68 - HUBER

1. DON! MASUMOTO'S EXPENSE ACCT. ENCLOSED
PLEASE HAVE HIM FILL IN NEEDED
INFO. & RETURN.

2. SIC 103 DRYNESS DR IN HOLD - LACKING
TEST EQUIPMENT (PLEASE FOLLOW).

3. SIC 104 - 0126 CONTINUING.

4. OCP 1201 - SC104 GOING SLOWLY.

STILL TAKING HYDROCARBON SAMPLES
OF GSE PER SECTION I.

7/15/68 2nd D. Rhodewalt

(1) Prop (103) dryness - all test kits found in cuib.
Trying to get tech for dewpointer etc @ 1900hrs

2 F/c (104) in large hold waiting for inspector
to verify hydrocarbon readings. Stacks inspector
not qualified. Started to go after lunch - problem
tank from preheat - interferences with 5060. Will
TVAR around

Bill (3) Performance appraisal completed for Alex O. put copy in top drawer of your desk.
 (4) 1201 Pretest completed @ 2400 hrs - 3rd should go into Sect II
 BRD SHIFT 7-15-68 BEAMAN.

104 (1) 1201 ON LINE TAKING HYDRO CARBON COUNTS. (NEWMAN & FARR) 0126 IN SEQ 023 GOING TO SEQ 027 THEN GO INTO SPECIAL COM TEST.

103 (2) JIM BERG TRYING TO WORK DR 211 ON MOISTURE TEST. THIS IS A REAL SCREW UP. EQUIPMENT ARRANGEMENTS ARE SILK. GATHERING REQUIRED ~~EQUIPMENT~~ ^{CALIBRATION} FOR HYDRO CARBON CHECK OUT. THE ONLY SIGNATURE ON DR WAS McCLINTOCKS, HOW WE SOLP CERTAIN STEPS TO START WITH IS VERY QUESTIONABLE.

104 (3) YAW ENGINE HAD TO GO BACK FOR RE-WORK BECAUSE OF DAMAGED WIRES. PITCH ~~ENGINE~~ ENGINE STILL BEING BONDED. 0600 CHANGE ABOVE - YAW ENGINE NOW HAVING WIRES FIXED ON STACK. THE PITCH ENGINE NEEDS A MODIFICATION NAME PLATE. THE STACK WILL GET THE ENGINE LESS THE NAME PLATE AND TAKE A DR AND PUT IT ON LATER.

7/16/68 - HUBER

1. OCP 1201 + SEC 104 IN HOLD IN SEQ. 5 WHILE F/C'S ARE ^{BEING} INSTALLED PER FAIR TICKET. SHOP HAS REQUESTED & WE HAVE AGREED TO HAVE A SYS. ENGR. ON THE STACK FULL TIME DURING F/C INSTL. & OCP 1201. PLEASE FOLLOW THROUGH ON THIS AS SHOP GETS AWFULLY WRAPPED AROUND THE AXLE W/O AN ENGR.
2. SIC 103 U36 GEN TPS SO SCHEDULED TO GO INTO WORK AT 4PM. THIS WILL CLOS^{ES} WIRING OF THE TWO ENGINES THAT WERE REPLACED. MANHA HAS ~~JUST~~ JUST COMPLETED TPS (NO # YET) FOR REST OF RETEST ON 103'S ENGINES. LATTER TPS CONSISTS OF GAS BLOWDOWN FOR THE 2 ENGINES & ULV. SIGS. FOR ALL OF SYS. 1.
3. OCP 0126-104 COMPLETE EXCEPT FOR SHUTDOWN. THEY'VE BEEN RUNNING A COMM. TEST ALL DAY.
- 4.

7/16/68 D. Rhodewalt 2nd

(1) 104 Prep for 4224 (don't work 1036 & 10030 for 4224 concurrently)
 space prob on 0126

(2) 1201 - Problems -

- (1) F/C #2 which was installed would not fit Xmas for 2 reasons as noted below.
 - (a) Rivet heads interfered with rt hand Xmas tree bracket (this cell different from other 2 cells.
 - (b) rt hand bracket mounting holes approx 1/2" vertical misaligned with shroud nut plates.

2nd DMR (cont'd)

1201 (cont'd)

The basic prob. here is that the F/cells are shown by ~~draw~~ to be completely interchangeable and they are not. ~~Initial draw should be coded to reflect this difference.~~
 reflect See note #6

The plot now is to remove F/c #2, put 1 or 3 in its place & drill new holes in Xmas tree support bracket (vt hand) to fit shroud holes.

(An existing EO on 103 allows this.)

Bill → (3) T/A's for Yahn + Paul completed & returned to your desk. Clades also enclosed.

(4) TPS 50 in work. K. Ames, one of two engines ok. Wiring problem in ~~YAW engine~~
 - YAW engine.

(5) Pretest on 4224 being worked by Alex O. However they are only in the gathering of equip stage.

(6) F/c 104

F/c all weighed this shift.

As noted in #2 above F/c #2 which had been installed was an odd ball. Functionally its ok, but it had protruding head rivets which prevented Xmas tree mounting. It can be used in #the #3 or #1 positions. Plans are now to install it last just in case. Eng. is saying (Bevan) we shouldn't use it but can give no reason. I think F/c say wants a method set! Xmas tree bracket being drilled with new holes per 103 EO against draw.

(7) DR 13 (1518) Sub DR 111

Connector worked tonight by connector manuf. Pins had loose springs. Pins repaired & retent will ~~be~~ require LNe into tank to close heater!

3RD SHIFT WED. 7-17-68 BERMAN

104 (1) 4224 PREP SEVERAL QUESTIONS ON TK CONFLICT WITH 103. ANSWERS WE RECEIVED INDICATE NO CONFLICT BETWEEN 103 EFFORTS AND 4224 ON 104. MANNY SAID THERE MIGHT BE A PROBLEM WITH TGS PATCHING. IF VALVE SIGNATURES ARE BEING TAKEN ON BOTH BUT TGS SAYS NO. (TB-1 FOR MINUS PITCH ENG HAS A BAD MODULE R/R - 4224 NO PERSONNEL AVAILABLE)

103 (2) J. BERG WORKING TPS 50 AT 0300 HE HAD A PROBLEM WITH AN RCS ENGINE THAT MAY HAVE HUNG UP BUT HE MAY HAVE SOME BETTER LOOK LATER. IT MAY BE A BAD TERMINAL 919 TB. REQUESTED XRAY. (MOISTURE HYDROCARBON)

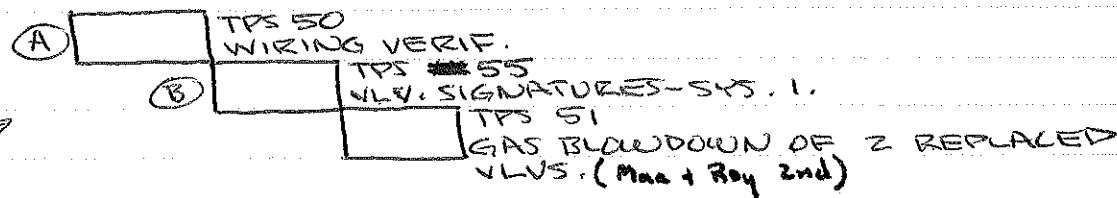
103 (3) DR 211 - UNDERSTAND THIS HAS SHUT DOWN AND WILL BE RUN IN TEST CELL. FROM SYSTEM NOTE BOOK.

104 (4) FUEL INSTALLATION - ELECTRICALLY MATE FC 2 AND PLATE FC 3 IN PLACE TO NOTE PRELOAD ON FC 2 LINE CLAMP. ~~MUST~~ REMOVED & REPLACED XMAS TREE W/B LINE F8. MAY HAVE TO ELONGATE HOLES ON LINE CLAMP TO PREVENT XMAS TREE LINE PRELOAD.

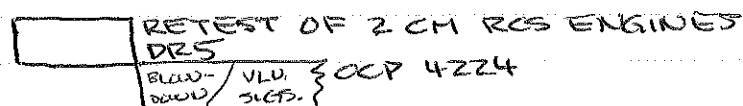
7/17/68-HUBER

1. HERE IS PROPULSION PLOT ON S/C 103 & 104.

S/C 103



S/C 104



NOTES

- (A) INTERMITTENT COPPER PATH FOUND TO REPLACED YAW ENGINE. WIRE REPAIR REQ'D. PRIOR TO GOING INTO TPS 50.
- (B) RUV TPS 55 (VLV. SIGS.) PRIOR TO TPS 51 (BLOWDOWN) SINCE 55 REQS. SAME PLUMBING TEST SETUP AS TPS 50. TPS 51 REQS. DIFF. SETUP.
- (C) CONFLICT MAY COME UP BETW. 103 & 104 IN THAT.
 1. TGS CAN ONLY SUPPORT 1 S/C VLV. SIGS. REPATCHING FOR ANOTHER STACK, REQS. APPROX. 1/2 HR. CURRENTLY PATCHED FOR S/C 104.
 2. WE ONLY HAVE ONE BLOWDOWN PNEU. CONSOLE (OLD SK-TC-107). CURRENTLY ON STA. 2B(104)

010
5060
106 1/0
100

SUGGEST WE PLAY IT BY EAR & WHICHEVER S/C GETS THERE IT ~~USE~~ USES TGS & CONSOLE. IF BOTH S/C ARE READY YOU'LL NEED A MGMT. PRIORITY DECISION. SUSPECT 103 WILL GET NOD.

2. DON: O'CONNELL WILL NOT BE IN TONITE. DUTTON & McCLINTOCK WILL COVER. DUTTON WILL STAY TO 7/8 & THEN MC WILL COME BACK IN.
3. 1201: P/C'S 2 & 3 INSTALLED. GETTING BACK INTO SEQ. 5 TO LK. CHECK THEM.

7/17/68 2nd D. K. Schubert

104 (1) F/C or 4224? - mass spec priority goes to fuel cell

104 (2) Possible power down Friday for AF period

(3) P/c 104 (1201)

1st @ turnover had just picked up DR #3. CBI would not stay closed. T/S revealed LV22 was shorted. The TER had valve on stack with valve box depressed @ 1830 hrs. Valve back in @ 2130 hrs - starting hydrazine + blowdowns see note 9

(4) Prop S/C 104

DR 5 in work by K. Ames. Completed @ 2100 hrs. Getting ready to go back into 4224 @ 2130 hrs (see note 8)

(5) Prop S/C 103

TPS 50 X'rays for terminal ok @ 2100 hrs Getting in position for valve sign

(6) Ref V37 EPS DR112

Bill H. Dispositioned to R & R cell @ 1700 hrs.
Eng voided disposition & went MR on prob
@ 2000 hrs.

I got in big flap with Berrara & Owens
because they did not contact Huber prior to
voiding his disposition. Talked it over with
Jones who had talked to Huber & Larsen
& plot at 2200 hrs was to let F/C go the
MR route but not move it off stack & also
try to get a correctly configured cell on stack.
Hold for O₂ valve box prob & leak check of
other two cells will allow a regrouping on days
for a better evaluation of prob.

(7) TPS 50 completed - engines ok per Mac
J. Berg in @ 2300 hrs to start valve sign.
TPS 54.

Bill Alex may not be in tomorrow - will call early.

(8) 4224 (104) in hold @ ~~2300~~ 2330 hrs for
test kits used on 4225 that are still in place
& in way - notified TER.

(9) No work done to 2300 hrs - saw them moving
ki-bottle to stack for blowdown.

Bill → Get with Newman on valve box effort after
2100 hrs - its some story TER FLAT

3RD SHIFT - 7-18-68 BEAMAN

(1) SEE NOTE 899 SECOND SHIFT. TER CLOSED
OUT SUB DR. BLOW DOWN AND HYDRO CARBON
COUNT TAKEN USING DR IN CONTROL
ROOM. SAMPLES TAKEN BY 0400 AM.

(2) BERG RUNNING TPS-55. RAW IN TO
PROBLEM HOOKING UP TO TP-20. OLP
SOK. ON IT ENG. RECOMMENDED TO USE
LUBE AND 20" LB TORQUE WRENCH TO HOOK
UP.

(3) MANNY SUPPORTING 4224 PRETEST. JUST
CHECKING ON SP006 XDUCE. HAD PROBLEM
IDENTIFYING LOCATION OF XDUCE.

103 (4) 5060 IN HOLD FOR ASTRONAUTS - 104 TROUBLE
SHOOTING. TOP DECK BUILD UP IN WORK.

103 (5) TPS 55. MATES CONNECTORS P 953:
THRU 956 TO RCS CONTROL BOX. THESE
CONNECTORS MUST BE DE MATED
FOR OCP 10030 OF 5060.

103 (6) CABLES FOR G14-208 W125-4124
HAVE BEEN DISCONNECTED AND HAVING
HELL OF A TIME GETTING CONFIGURED.
DIFFICULTY FINDING CABLES.

7/18/68 - HUBER

1. WEEKEND O.T. SHEET ENCLOSED.
S/C'S 103 & 104 WILL TEST SAT. & SUN.;
S/C 106, SAT. ONLY.
2. TPS 55 (VLU. SIGS.) COMPLETE ON 103.
TPS 51 (BLowDOWN) IN HOLD SINCE
104 USING SK-TC-107 PNEU. CONSOLE
IN OCP 4224.
3. OCP 1201 IN SEQ. 6 LK. CHECKING
F/C 2 & 3 INTERFACE JOINTS.

7/18/68 2nd DRhodewalt

- (1) Turnover notes
keep SK-TC-107 till 4224 is thru with it
S/C 103 needs it for TPS1 but can't run
~~concurrently~~ concurrently with 5060
- 4224 @ 01-061 had just picked up DR#1.
DR 1 cleared early on shift & running strong

(2) F/C 104 1201

At ~~06-026~~ 06-026 DR 5,6. @ turnover. Spent
1st half of shift correcting leaks (DR 5,6). After
disconnecting @ leakage areas found lines badly
misaligned (after they were loosened). Mockup
& tweaked lines till they were correctly aligned
with interface.

Bill → Strongly suggest that lot of 3rd use mockup man to
align plumbing rather than force it to make connection.
This is where all the leaks develop. If joint
doesn't leak there is a hell of a misalignment
force at the joint when forced into position.

4 F/C INTERFACE JOINTS
REPORTED LEAKING @ 8AM, 7/19/68.
F/C 2 (F1, F2 & F4) & F/C 3 F1

(2) cont'd

Down to last line on #2, 3 @
2300 hrs. (H₂ F/C #3). It was causing
problem & last word was they were
going to pull it & examine examine
flange etc. It can't be made tight.

3RD SHIFT

- ① 4224 GOES VERY SLOW ~~to allow~~
PATCHING IN PARTICULAR,
- ② 1201 STILL HAVE LEAKS AFTER
MOCK UP AND MANY JOI SHAN & CHANGES
~~NEED HIGHER TORQUE VALUE OR~~
NEW LINES. TRYING ONE MORE TIME
WITH MOCK UP MAN DOING THE
INSTALLATION WHILE LOOKING FOR
REPLACEMENT LINES.

7/19/68 - HUBER

1. 4224-104 RUNNING VLV. SIGS. CURRENTLY HAVE WIRE/CONNECTOR PROBS?
2. VLV. SIG. DATA ON S/C 103 WAS GOOD.
3. GET INTO TFS 51 (S/C 103 BLOWDOWN) AS SOON AS ACCESS ON STA. 2C PERMITS.
4. ON S/C 104: SEQ. 06-073 TO END OF SEQ. 06 OF 4128 STILL HAS TO BE RUN. PLANNED TO FOLLOW 4224.
5. H₂ REG. PRES. XDUCCER ON F/C 2 WENT INTERMITTENT TODAY. DON'T KNOW WHETHER XDUCCER IS BAD OR NOT. WILL HAVE TO FIND OUT WHAT IS BAD & REPAIR BEFORE WE INSTALL F/C 1. IF XDUCCER TURNS OUT TO BE BAD & IF IT APPEARS WE CAN'T GET ONE FROM EAST HARTFORD STOCK OVER WEEKEND SHOULD SWIPE XDUCCER FR. F/C 1 ON STACK. I TALKED TO LARSON ABOUT THIS & HE CONCURRED.

~~Huber~~

7/19/68 2nd J. Rhoadesult

- (1) 4224 in DR 2 (seq 02-026) @ turnover problem resolved & was good up to 2130 hrs. Went into ZEK hold them for reconfiguration for last test.
2. Fuel cell - problems @ turnover
 - (a) F/C #3 bad H₂ line - flat spot on fitting, cracked flange.
 - (b) H₂ Reg Press Transducer F/C 2 intermittent - this recurred on 2nd shift & was monitored in control room
 - (c) Contamination on ~~F/C #3~~ F/C #1

~~Action Taken~~

(at

Action taken

- (a) Obtained another line - proofed it in BMC area (took 5 hours)
- (b) T/S F/C 2 & 3 both went below atmospheric pressures. Values going to 1/s
- (c) Ordered another F/C although original disposition on MR was to take lab sample & analyze. This may take days. Another cell ordered in case.
 ↗ Don't know whether CIC accomplishes this.

103 /31 Alex O'Connell started to pick up on TPS 51 @ 2300 hrs. 5060 to 3366, 3300, prevented working this prior to this time. Checking on location of SK-TC-107. Still on 104 @ 2330 hrs - TGR getting paper to move

3RD SHIFT 7-20-68 BEAMAN

104 ① 4224 COMPLETED ABOUT 0800 SET UP AND RUNNING SEQ 06 OF 4128.

104 ② STILL HAD LEAK ON FC 3 LOOKS LIKE BAD FITTING ON F.C. CALLED IN PHOTOGRAPHER AND P+W REP. THE H₂ REDUCER WAS ~~THE~~ TROUBLE SHOT AND NO CONCLUSION OR SOLUTION OF PROBLEM. WIRES WIGGLED ~~BY~~ ART JONES CALLED EAST HARTFORD CONCERNING BAD FITTING. PICTURES TAKEN DON'T LOOK LIKE MUCH.

104 ③ ~~BROUGHT~~ HAVING TPS WRITTEN TO BRING ADDITIONAL FUEL CELL TO BASE OF 2B JUST IN CASE.

104 ④ CONTAMINATION OF FUEL TURNED OUT TO BE LEAD AND TIN, ENGINEERING NOW EVALUATING THIS PROBLEM.

103 ⑤ BERO WORKING ON TPS 51 TO ~~SET~~ THE ~~RE~~ THIS JOB TAKING QUITE A BIT OF TIME BECAUSE OF COMPLEXITY OF HOOK UP.

⑥ ART JONES & ELLIS COOK CALLING EAST HARTFORD ON CONTAMINATION OF FUEL NR 1, ^{P+W} THEY ALSO RECOMMEND REMOVING FUEL CELL #3.

⑦ 1

~~7/20/68~~

7/20/68 2nd D. Rhodewalt

(1) 104 4224 completed on 3rd 4128 completed on ~~1st~~ 3rd

(2) 1201 in hold for 7018. Sent Walt home. Paul working on F1 line. Sector 4 closed out however Paul is checking leakage on new line with a std fitting - will use this uniform to compare with actual fitting on F/C when available. See note ⑤ (4)

(3) 103 Winding up TPS 51 (step #66) @ turnover. After completing this will go into moisture check portion of DR # 211

TPS 51 completed @ 1930 hrs, configuring for DR 211 work
Prob. obtaining some one familiar with Beckman analyzer - finally got tech. Repatching (original all torn down) completed @ 2330 hrs

TUAR done this

(4) 7018 winding up - need to get back into F/C problems on 104. 3rd needs to do following:
→ (a) paper work to remove sect IV panels
(b) T/S DR 7 on sensors note - this is holding up power down on 104
(c) continue leak check on F1

(4) cont'd

Fitted -63 line w/ new fitting and it still leaked.
 At 2830 meeting engrs said that F/C #1 will still be used. They are trying to get words from P/W but this is for MR. MR will still direct installation of original F/C #1.

7/21/68-HUBER.

1. S/C 104 PURING DOWN FOR MOD. PERIOD. -63 LINE STILL LEAKS.
2. S/C 103 SHOULD DEMATE TONITE. CMRS DRYNESS CHECKS NOT COMPLETED - WILL BE DONE IN TEST CELLS.

7-22-68 BEAMAN - THIRD SHIFT.

① S/M TANKS WERE FOUND WITH TK STILL HOOKED UP FROM OCP 0131. APPARENTLY NO PRESSURE ON TANKS.

② F/C & CRVO

FIC C&W INPUTS

1510: 15, 17
1510: 11, 16

M A

Get times, vacuum center, lines to tapes.

7/22/68-HUBER

SYSTEMS
(ATO)

1. S/C 103 CM IN B/L TC. WE ARE NOT DIRECTLY INVOLVED IN OCP 4171 AS YET. WE MAY BECOME INVOLVED HOWEVER & SHOULD HAVE PROP. ENGRS. MONITOR OCP 4171 STATUS (DR'S, WHERE THEY ARE, ETC.) ON ALL SHIFTS.
2. S/C 104 PUR'D. DOWN & IN Δ F MOD.
3. REVIEW OF 4224-104 VLU. SIG. DATA SHOWS 1 ENG. DEFINITELY BAD (SYS. 1 +P). ~~ANOTHER ENGINE (SYS. 1 +P) POSSIBLY BAD.~~ ANOTHER ENGINE (SYS. 1 +P) POSSIBLY BAD. LET'S HOLD OFF ON REPLACEMENT UNTIL WE GET WORD (PROD. TOMORROW) ON LATTER ENGINE, THIS WAY WE CAN CHANGE BOTH ENGRS. AT SAME & ONLY HAVE TO GO THRU THE "SUPPLY PURGE BIT" ONCE.
4. PLEASE HAVE 2ND & 3RD SHIFT FIC ENGRS. WORK AT SELLING FOLLOWING DR'S TO NR QC &, IF POSS, NASA QC.
 OCP 1201 DR 1, 2, 3, 4, 6
 HAVE PROP. TYPES WORK AT SELLING OCP 4225 DR 5, 11
 OCP 4128 DR 14. SOLD 7-22-68
5. JACK: IF IT DOESN'T UPSET FARR'S SCHEDULE TOO BADLY I WOULD LIKE HIM BACK ON DAYS ~~FOR~~ DURING MOD. PERIOD TO WORK DR'S.

7/22/68 2nd D. Rhoadwalt

Bill → (1) Walt Y. asked if he can rotate with a day shift type for one month - to satisfy his wife. Please let me know. Start any time. WILL ARRANGE ILL LET YOU KNOW

Bill Paul Masumoto. new phone number 962-8048

(2) Had Yuhn pull data - per your request on pg 197

Both F/C types looked at DR7 + ~~FL~~ FI interface with the idea of doing further testing tonight. Everyone agreed they couldn't leak test without vehicle power. They contacted ISE regarding DR7 no luck. Looks like only out is R&R. Everyone is stymied. No res from M&TS.

(3) B1 - starting 4171 @ 2300 hrs

3RD SHIFT 7-23-68 BEMMAN

① S/M ~~Part~~ DUST CAPS FOR REG SENSE PORTS MISSING C/A MADE AND DR SOLD.

② DR #12 4128 M.A. SQK TRANSFERRED TO ANOMOLY BOOK
4225 DR #5 NEED SUB DR
A 98490 - A ITEM 187 TI
CLOSED ON THIRD SHIFT - DAY SHIFT
DR #11. NEEDS END CONCLUSION, WE DON'T KNOW THE TUNE, DAY SHIFT.
4128 DR 14 SOLD 7-22-68 Δ.

7/23/68 - HUBER

1. 1ST SHIFT F/C TYPES ALL BUSY SELLING DR'S, WRITING RETEST TPS'S, ETC. 2ND ^{OR 3RD} SHIFT RESTRICTED IN DR SELLING BY LACK OF NASA, ETC. THEREFORE I WOULD LIKE THE FOLLOWING DONE ON 2ND & 3RD SHIFT (ONLY):

A. S/C 106: REMOVE XMAS TREE, INSTALL NICKEL UOI-SHAFTS & PLUGS (TORQUED TO 125 IN-#) IN ALL F/C INTERFACE JOINTS & LEAK CHECK (HE & SNIFF) @ OPER. PRESSURES.

B. S/C 104: REMOVE -63 LINE & VERIF. AS ABOVE THAT IT SEALS @ 125 IN-# TORQUE.

2. ONLY PROP. ACTIVITY ON 2ND & 3RD IS FOLLOWING 103 IN B/1 & B/260.

7/23/68 2nd D. Rhoadwalt

(1) Item #1B above already done on DR item #1A in work (see note 3)

(2) Turnover - 4171 in work - word from lot shift that 4171 & 4172 could not be worked in II. Trying to reach safety on this. Got ok - letter enclosed - allows 4172 + 4171 in II (allow ^{prop} of _{2/m})
4074 in work B/260

(3) S/C 104 - pitch RCS being replaced (on 3rd) by FAIR ticket. ↑

(4) F/C Got TPS signed & released for Xmas tree check on 106 but couldn't find tech or QC to work. Will forward to 3rd.

(5) 3/260 4074 now doing transducer c/o say 2.4.

3RD SHIFT 7-24-68 BEAMAN

106 ① F/C TPS PUT IN WORK GATHERING MATERIAL - GETTING MASS SPEC REPAIRED UNTILL 0400.

104 ② MANNY - WORKING ON GETTING PURGE FOR ENGINE CHANGE. TICKET PUT OUT TO GLUE XDUCER ON REPLACEMENT ENGINE.

104 ③ LINES HOOKED UP FOR PURGE, MANNY PUTTING NOTES IN 104 LOG CONCERNING CONFIGURATION. PROP ISOLATION VALVES ARE OPEN.

7/24/68 - HUBER

1. PLEASE CONTINUE S/C 106 XMAS TREE C/O. HAVE FOUND MANY LEAKS.
2. ONLY PROP. ACTIVITY IS TO MONITOR 103 IN B/1 & 260 TC'S.
3. S/C 104 MOD. PERIOD CURRENTLY EXPECTED TO LAST TO MON. PWR. UP ESTIMATED FOR MON. AFTERNOON.
4. DR #7, OCP 1201-S/C 104 (IE, H₂ REG. PRES. XDUCER TRANSIENTS) HAS BEEN DISPOSITIONED TO R&R XDUCER/SIG. COND. PRR HAS BEEN SUBMITTED TO GET REPLACEMENT FR. EAST HARTFORD. — MAY HIT THE FAU WHEN ENGRS. DISCOVERS PLOT TO R&R (THEY WON'T SAY WHETHER XDUCER IS GOOD OR BAD). CASSON IS AWARE OF R&R PLOT.

7/24/68 2nd D. Rhodewalt

May have
 (1) ~~found~~ found out problem on DR #7 - by accident. Happened to hear 10E on our shift talking about future T/S tonight & asked about F/C sensors. According to him the sensor cases ^{are} grounded - but shouldn't be (should be floating ground). This was done by accident during bonding oper. He apparently knew this last night. Ordinarily this could be corrected by simply disconnecting ^{ground} ~~bond~~ a sensor but bond is too good & case would be ruined. He was T/S on DR #5 (0131) and found the above condition on SC 2090 last night & S/C 2089 tonight.

S/C 104 → Both the above 2089, 2090 will be an R&R.

- (2) They are finding same problem in item #1 in the RCS sensors.
- (3) 4171 still not officially started. Still trying to dry system.
- (4) 4074 sniffling say 2.5.17
- (5) 4172 in hold for bonding open on connectors
- (6) P/C types did R & D on Xmas tree all shift. Hope this will do some good. Got some good seats @ 185" but not 100%. Looks like problem is combination of things. Bad flares, bad fittings, low torque.
- No word from P/C any on RR (R47).

Bill Based on item #1 it might be wise to get instru types to check all transducers (F/C, RCS, SPS) for correct grounds. — I can remember lost time in integrated because of spurious signals in the RCS/SPS area

Bill → (7) Paul M. has request for vacation in for 8-5 to 8-11
How about substitute? NO PROBLEM.

7-25-68 THIRD SHIFT BERMAN

- 106 (1) TPS ON XMAS TREE COMPLETED ON SECOND SHIFT. NEEDS SOME RESOLUTION
1. HIGHER TORQUE
 2. DIFFERENT SEAL
 3. FLARE PROBLEM (TOOL, POLISH ETC.)

103 (2) 4074 HELIUM REG CLASS 1 DOES NOT SM. PRESSURIZE TANKS. SEQ 26 DR#2.

103 (3) EXTERNAL CONDENSATION WHEN SPS FUEL TANKS DEPRESSURIZED. APPARENTLY PRESSURE CAN NOT BE THROTTLED.

(4) RCS - SCHOOL. 0830 AM. 7-25-68
1935-6-7 ROBERT OLINGER
DO YOU HAVE ANY ATTENDEES?

103 (5) 4171 IN PROOF PRESS CHECK 4172 IN HOLD.

104 (6) FINALLY GOT PURGE ON ENGINE. IT REQUIRED DETAILED STEPS ON CONTINUATION SHEET. SECOND SHIFT AND DAY SHIFT MAY GET SOME OF THIS WORK DONE WITHOUT A PIECE OF PAPER BUT WE CAN'T ON THIRD.

(7) TB-29 MUST BE REPLACED.

7/25/68-HUBER

1. CONTINUE R&D ON XMAS TREE.
2. ZTUI QUAD MAY ARRIVE IN DME ABOUT 6PM FOR C/O PRIOR TO SHIP TO MSC. RON STEDMAN (ENGR) WILL CONTACT US WHEN QUAD READY FOR C/O. PAPER HAS BEEN WRITTEN.
3. WEEKEND O.T. SHEET ENCLOSED.

7/25/68 2nd D. Rhoades

(1) O/T enclosed

Bill

(2) Walt getting nervous about rotating

(3) Minor flap on fuel cell line damage Sect #4

Found 2 lines (interface P/C to O₂ H₂ Tks) right hand side that are R&R on DR#4. These are being R&R'd on FAIR Ticket.

3-4 more odd sykes in same area on misaligned bronze joints, nicks etc. That may be handled by shop std repair.

It looks like bent lines occurred on Xmas tree removal (3rd?) The other sykes its hard to say.

(4) Prop. ZTUI Quad never showed up. Stedman went home @ 1800 hrs

... ..

(5) ~~4074~~ He veg shot - may replace veg or entire ~~active~~ Helium package.

7-24-68 3RD SHIFT

S/C 103 THE PROBLEM ON THE BAIL VALVE WAS SOLVED BY INSTRUMENTATION GADJA IT SEEMS THAT T/C GSE WAS PICKING UP GROUND SIGNAL AT WRONG PLACE.

7/26/68-HUBER

1. NO S/C 106 ACTIVITY.
2. FOLLOWING OF TEST CELL ACTIVITY ONLY EFFORT ON S/C 103.
3. ZTUI QUAD HAS NOT ARRIVED ^{IN DME} YET. MAY BE READY FOR TEST TONITE.
4. PLEASE HAVE F/C TYPES FOLLOW
→ R&R'ing OF DAMAGED LINES IN S/C ~~106~~ 106.

7/26/68 2nd D. Rhoades

(1) F/C 106 6 lines now being replaced on vehicle, this shift - Fuel Cell area. Xmas tree ved tagged. Called photography to take pictures of damaged lines & bad Xmas tree flaves.

(2) Received an Extensive ATR from eng on the C/M RCS engines - all engines except + yaw sup. B. - test for valve sign, valve seat leakage, etc. Got ATR @ 2300 hrs. Finley, Alex looking over - will pass copies to 3rd.

7-27-68 3RD SHIFT

NEED SOMEONE TO REVIEW MANUFACTURING WORK ORDER S/C(8?) AND SIGN IT HOT ITEM.

7-27-68

THEY ARE GOING POWER DOWN S/C 104 AND WILL NOT POWER UP UNTIL 2400 HOURS SUNDAY 7-28-68. THE EES TYPE WILL BE THE ONLY OWERS TESTING SUNDAY.

7/27/68 - HUBER

1. SCORECARD FOR S/C 104 RETEST ATTACHED TO OPPOSITE PAGE.
2. WE HAVE RECEIVED AN ATR TO PERFORM ^{CHRS} ENGINE VLU. SIGS. THIS WILL BE DONE IN B/I TEST CELL. WE WILL SUPPLY THE PAPER. TEST SCHED. TO START SUNDAY 6 P.M.
3. SOME F/C LINES ON SECTOR III ARE BEING REPLACED & WE ARE PROVIDING PURGE.

7/27/68 2nd DRhodewalt

- (1) TPS started (writing only) for ATR
- (2) s/c 104 pitch engine installation in work all shift per FAIR.
- (3) Regarding ATR (item 1), Asked Tom F. about coming in tomorrow but has to go to Diego to pick up wife. Alex will be in but 2 people would be a help in running this odd ball.

DON RAY'S HOME PHONE: (?) 431-47352 SEAL DEK4.
DURLAND'S : (213) 372-8582

Bill

S/C 104 RETEST FOLLOWING POWER-UP

Δ PWP. UP & COOLING ACTIVATION

SECS/G&N/SCS PNL. RETEST TPSS

← 2-3 shifts →
SPS/RCS PNL. RETEST
V34 GEN RETEST TPSS 012

(RCS SIMULATORS)

PROPULSION

OCP 4224 DR. 4
-P ENG. RETEST (ENGINES CONNECTED)
← 2 shifts →

← 12 hrs. →
~~FIC PNL. 2 RETEST
V34 GEN RETEST TPSS 015~~

← 24 hrs. →
~~FIC PNL. 3 RETEST
V34 GEN RETEST TPSS 016~~

~~T/S OPEN OCP 1518, 1510 & 1201 DR'S~~

FIC'S & CRKO.

~~OCP 1201~~

Replaced by
attachment to P. 214

7-28-68 3rd SHIFT

S/C103 A TPS HAS BEEN WRITTEN TO CHECK C/M RCS ENG. LEAKAGE & VALVE RESPONSE. (V36-400001. AT THIS TIME WE HAVE NO TECHS. FOR WORKING THESE TESTS UNTIL 08:00 AM TODAY.

S/C104. STILL POWER DOWN AT THIS TIME

S/C106 THE WORK FOR OR #9, #8, #10, #12 AND #13 HAS BEEN COMPLETED AND THEY ARE WAITING ON X-RAY AT THIS TIME.

~~7/28/68~~ 7/28/68 2nd D. Rhoads

- (1) P/C effort this shift - reworking 106 lines after X-RAY's failed - 3 lines
- (2) ATR being reviewed, etc in Bldg 1 prior to its release
Cable delivered to test cell for C14-650 @ 2200 hrs.

7-29-68 3rd SHIFT

S/C103 THE TPS FOR CHECKING OUT VALVE RESPONSE. REQUIREMENTS IS IN WORK AT THE TEST CELL.

S/C106 THE LINE V36-459031-105 HAS BEEN REHEATED AND ARE WAITING FOR X-RAY PEOPLE, WHICH ARE SUPPORTIVE S/C 103 AT THIS TIME.

7-29-68 3rd SHIFT

S/C106 THE BLOW-DOWN & MILLIPORE SAMPLING STEPS BOTH WITH X-MASS TUBE INSTALLED & WITHOUT THE X-MASS INSTALLED.

S/C104 THE POWER IS STILL OFF AND WILL NOT BE TURNED BACK ON UNTIL TUESDAY 7-30-68.

7/29/68-HUBER

1. ZTVI QUAD HAS BEEN CHECKED OUT AGAIN IN BME. QUAD O.K. CHECKOUT COMPLETE.
2. SPECIAL VLV. SIG. TEST ON S/C103 CONTINUING IN TEST CELL 1. YOU WILL HAVE TO SUPPORT THIS ON 2ND & 3RD SHIFT.
3. OTHER PROP. & F/C ACTIVITY SHOULD CONSIST OF REVIEWING PNL. RETEST TPS.
4. S/C104 PUR. UP WILL NOT BE TIL TUES.
5. OCP 1518-S/C 106 MIGHT START AS EARLY AS WED. NOTE: WE WILL NOT HAVE A XMAS TREE INSTALLED FOR THIS OCP BUT WILL USE PLUGS & FLEX LINE JUMPERS.

7/29/68

- F/Cell
- (1) Xray failed on one joint (S/C 106) — being rebrayed —
 - (2) Had John & Paul checking config for 1201

Prog

- (1) ~~ATR~~ ATR going strong in Bldg 1 ✓
- (2) S/M held up most of shift writing for line clamps to be installed.

7-30-68 3rd SHIFT

S/C 103 THEY COMPLETED TPS ON RCS END LEAKAGE & VALVE RESPONSE.

S/C 104 THE POWER-UP PLAN IS 7-31-68 WEDNESDAY.

S/C 106 THE LINE V37-954031-105 WAS RE-HEATED ON 2ND SHIFT AND X-RAYED ON 3RD (X-RAY GOOD).

7/30/68-HUBER

1. S/C 104 PWR. UP NOW SCHEDULED FOR 8 AM. WED.
2. OCP 1518-S/C 106 AT LEAST A DAY AWAY.
3. ONLY TEST ACTIVITY TONITE IS WITH ^{REFURBISHMENT} C/O OF S/C 106 XMAS TREE IN B/61, DEPT. 659. WE SHOULD MONITOR THIS CLOSELY, ASSIST PLANNER IN WRITING FAIR TICKET, COORDINATE PRESSURE TEST SETUP, ETC. 2ND SHIFT OPERATION ONLY — D/659 HAS NO 3RD SHIFT.

NOTE: IF YOU HIT SAFETY GLITCH IN GOING TO 1000PSI ON LINES, SAFETY REP. ON 2ND IS RON PURCIANCE, X4614. I HAVE GREASED OPERATION WITH LAMAR FRAUSEN ON 1ST.

7/30/68 2nd DMR

- (1) RCS TPS 008 S/C 106, Alex worked all shift on this trying to get TK's plus GSE lined up to go into test — this was a real disgrace! The TPS's has been out for a week & the supporting TER items still not available. The supporting items were on an TPS OCP-TK!

Xmas Tree

- (2) P/C A worked all night trying to get ticket etc squared away so everything — including proof etc would be done when it was returned. Xmas tree being press tested @ Bldg 61. Slight flog on getting press. source up there. What lay called (Ben Supur) No Safety Prob.

Bill (3) Understood a "C" release of MA0115-027 was released. This controls open of Mass Spec & in effect changes 5×10^{-6} to ~~1×10^{-6}~~ 1×10^{-7} .
Better check.

Bill (4) Paul Mr. going on vacation next week - ~~at~~ will need substitute.

7-31-68 3rd SHIFT

- ① S/C 106 OCP-1518 PRE TEST IN WORK AT THIS TIME 4.2 & 4.3 APPROX 85% COMPLETED.
- ② S/C 106 D659 PERFORMING GEAR CHECKS PER PAIR TICKET IN WORK & ALSO LINES ARE BEING REPAIRED AT THIS TIME.
- ③ TPS 008 IS IN WORK ON S/C 106.
- ④ S/C 104 HAS NOT POWER UP AT THIS TIME, BECAUSE OF CABLE PROBLEMS.
- ⑤ S/C 103 IS STILL IN TEST AT THE TEST CELL (OCP-4272) WITH W/B CIRCULATING THROUGH PRIMARY & SECONDARY LOOP.

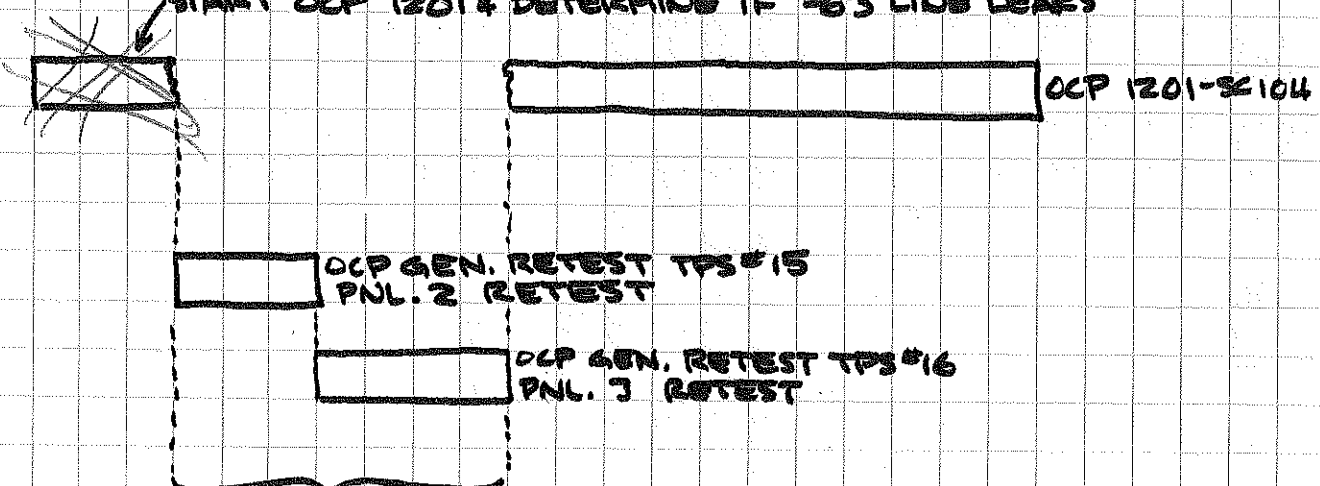
7/31/68 - HUBER

1. S/C 104 SHOULD PWR. UP WITHIN NEXT 24 HRS.
2. TPS: 15 & 16 (S/C 104 F/C PNL. RETEST) ARE SIGNED. GET RELEASED ON 2ND.
3. S/C 104 PROP. PNL. RETEST TPS NOT YET SIGNED. MUST BE MODED. WILL DO SO TOMORROW ON 1ST. THIS TPS NOT SCHED. TO SAT.
4. ACTIVITY TONITE:
PROPULSION - NONE PLANNED OUTSIDE OF GEN'L. SUPPORT
F/C - CRYO - ① PREP. & RUN TPS: 15 & 16 ON S/C 104
② FOLLOW UP AS TREE ACTIVITY IN B/61
③ ASSIST PRE-TEST PREP. FOR OCP 1518-SC 104
~~IF IT DOES START TONITE WE SHOULD HAVE F/C PRIORITY. OCP 1518-SC 104 SHOULD NOT START TIL TOMORROW; IF IT DOES START TONITE WE WILL HAVE TO RECONSIDER W/B ACTIVITY TO SUPPORT.~~
④ OCP 1201-SC 104.
REFER TO ATTACHMENT ON NEXT PAGE FOR S/C 104 F/C PLOT.

S/C 104 FIC-CRYO. TESTING FOLLOWING PWR. UP.

Δ COOLING & PWR. UP

START OCP 1201 & DETERMINE IF -63 LINE LEAKS



CANNOT BE RUN IN PARALLEL SINCE 397 DISCONNECTED DURING RETEST TPS#2.
START OCP 1201 IF POSS. & TRY -63 LINE, HOWEVER, 1201 GOES INTO
A HOLD AS SOON AS PNL. RETEST TPS#2 READY TO GO.

7/31/68 2nd DMFC

Bill

(1) F/C types preping for 1518 on 106

(2) Paul is going on vacation next week - will work Saturday but will be off Sunday. Also need sub for Walt when if he goes to days

(3) F/C 12" brace on 106 across Sect IV interferes with HP QD. In talking to Walt this will constrain us around Reg 049 SMD informed (ED Rousch) fooling.

(4) Pretest on 1518 (Ref Note 1 above) in real good shape - ~~station will probably not start~~ should start working from control room on 3rd shift.

8-1-68 3rd SHIFT

S/C 104

THE PIC PEOPLE WERE CALLED UP ON STA. BUT WE FOUND OUT BEFORE RUNNING TPs 015 & TPs 016 THAT WE WOULD RUN INTO PROBLEMS WITH ECS TPs 013. AT THIS TIME WE ARE WAITING UNTIL TPs HAS BEEN COMPLETED.

S/C 103

THE S/C & S/M HAS BEEN RETURNED BACK TO BLOC. 290.

S/C 106

THE DEPT. THAT ARE WORKING ON EACH XRAY TREE LINE DID NOT HAVE ANY ONE IN TO ACCOMPLISH THE BLOWN OR PRESSURE TEST. ALSO 1518 PRE-TEST IS IN WORK AT THIS TIME.

8/1/68-HUBER

1. WEEKEND O.T. SHEET ENCLOSED. PLEASE FILL IN NAMES & RETURN. NOTE SHIFT CHANGES FOR DORNIS, TYLER, MURPHY, FARR & O'CONNELL OVER WEEKEND.
2. S/C 103 CM BACK IN STA. SA. SHOULD HAVE PUR. ON TONITE.
3. WE HAVE A "SUSPECTED" DAMAGE DR ON A S/C 103 CM RCS ROLL ENG. DYNATUBE FLEX LINE. WILL REQUIRE LINE BE LOOSEND & STRAIGHTENED OR REPLACED (BRAZING). WE WILL HAVE TO SUPPLY PAPER (ON DR) TO PURGE, PERFORM A 300PSI DYNATUBE LEAK CHECK (WITH 150. VLV. ~~CLOSED~~ ~~RE-ESTABLISH~~ ~~SHIPPING~~ ~~PRESSURES~~) & RE-ESTABLISH SHIPPING PRESSURES.
4. S/C 106 WILL PROBABLY START OCP 1518 TONITE.
5. S/C 104 F/C PUL. RETEST TPS 15 COMPLETE; TPS 16 IN PROGRESS.
6. WE WILL BE VERY BUSY IN THE F/C AREA FOR NEXT WK. OR SO. TO ASSURE GOOD TURNOVER & EVERYONE KNOWING WHO IS DOING WHAT WE WILL USE THE FOLLOWING ASSIGNMENTS:

S/C 104 F/C EFFORT:

- ① TPS 15 & 16
- ② SEE IF -63 LINE IS STILL LEAKING.
- ③ VERIFY REPLACED ^{HE PRES.} ADAPTER ON F/C 2.
- ④ OCP 1201

G. JOHNSON-LEAD
W. RIVERA - 1ST
S. CORNWELL - 1ST

W. YAHN - 2ND

D. NEUMAN - 3RD

S/C 106 F/C EFFORT:

- ① OCP 1518
- ② ~~WAS TREE WORK~~

J. MARTIN-LEAD
W. FARR - 1ST (MON. ON)
G. DORNIS - 1ST (THRU SAT)
P. MASUMOTO - 2ND (THRU SAT)
E. MORPHY - 2ND (MON. ON)
W. FARR - 3RD (THRU SAT)
G. DORNIS - 3RD (MON. ON)

7. S/C 106 NOT SCHEDULED TO BE POWERED UP SUN.

8/1/68 2nd D. Rhodewalt

Bill (1) Alex requested a night off on Saturday. If possible to get a substitute he would appreciate it - I realize it's ~~not~~ late but didn't know till tonight.

(2) 1518 (106) Paul worked long & hard on Sect I but there are still lots of steps to buy off - I see at least another shift.

~~Bill~~ Bill/Chuck - had very rough night - please refer to system logs for details of tonight

8-2-68 3rd. SHIFT

S/C 104 AT THIS POINT IN TIME WE ARE STILL IN PRE-TEST OF OCP 1518.

S/C 103 THE ACTION ITEMS ON DR #109 HAVE BEEN COMPLETED.

S/C 104 AT THE PRESENT TIME, ARE IN DR 118 AND FOUND THAT LINE F₁-H₂ STILL IS LEAKING.

8/2/68-HUBER

FOR J. Schneider ATR WILL NOT BE RUN NOW, RUN ALREADY RELEASED RETEST TPS'S.

1. TPS 12 (S/C 104 PROP. PUL. RETEST) MAY GO IN WORK TONITE.
2. HAVE NEW ATR TO PERFORM SPECIAL ~~VALV. SIG. TEST ON S/C 104 SIMILAR TO TEST DONE ON S/C 103 IN TEST CELLS.~~ THIS ATR WILL BE RUN BEFORE INTEGRATED.
3. DON'T LET INK DRY BEFORE CLOSING BOOK. Sorry!
4. WE HAVE A DR AGAINST O-RINGS IN SPS PUGS CONNECTORS. INSTR. ENGRG. HAS C/A'd TO R&R O-RINGS. THIS IS NOT TO BE DONE AS DEMATING CONNECTORS WOULD RESULT IN EXTENSIVE OCP 4128 RETEST.
5. -63 F/C LINE ON S/C 104 STILL LEAKS. PLOT IS AS FOLLOWS:
 - ① WORK MR THAT SEZ TAKE TORQUE ON THIS LINE ONLY TO 175 in-#. MR ALSO SEZ R&R F/C #3 IF HIGHER TORQUE DOESN'T WORK. IGNORE THIS R&R BIT - F/C #3 IS NOT TO BE REPLACED.
 - ② ASSUMING HIGHER TORQUE DOESN'T WORK, R&R -63 LINE. ^{NEW} REPLACEMENT LINES SHOULD BE ON STACK TONITE.
6. OCP 1518-S/C 106 SECT. I JUST ABOUT COMPLETE. SHOULD GET INTO SECT. II TONITE.
7. CONTINUING 40 OF S/C 106 XMAS TREE LINE WILL BE A 1ST SHIFT ONLY OPERATION.

8/2/68 2nd D. Rhoadwalt

104

1. -63 line still leaked @ higher torque - went to limit, trying to get another line now. I've been told there's a flat spot on F/W unions. If this is the case - need other union

106

(2) 1518 (106) P/D for DCATS 049 conn. held for priority #1 5050. P/down @ about 2300 hrs to make conn. This I was told was last item to work

104 (3) TPS 12 ~~shelved~~ shelved - van TPS 14 instead

8-3-68 3rd. SHIFT

① S/C 103 WILL BE MOVING OUT OF ST45A ABOUT 06:30 AM.

② S/C 104 IS IN A ~~STAND-BY~~ STAND-BY CONDITION

③ INSTALLING F₁ H₂ LINE AND RETESTING FOR LEAKS. ALSO 1518 OGD IS IN TEST AT THIS TIME

8/3/68 2nd D. Rhoadwalt

(1) F/C S/C 104 1201

LINES PASSED LEAK CHECK AT 100 PSI PER OGD. LATER IN A/P WE RECHECKED AT 245 PSI. THEY FAILED AT HIGH PRES.

Got into leak check in 1201 & guess what - F/C #2 lines leak! Who, who? Sold off the leak check of these lines? Plot is to break lines use sub. etc to try to get leak tight joint - will also go higher torque if rigid.

Bill (2) See note in Jerry log on Top Deck. Prob on coverage went away.

(3) Prop - TPS 020 released however

steps were added to TPS by M&TS

without System ATO concurrence.

Watch this - they bleed bladders.

M&TS was right.

8-4-68

S/C 104 MAINT FUEL COIL PROBLEMS WITH LINE F₂ IT IS STILL LEAKING EVEN AFTER INSTALLING A NEW LINE, AND AT THIS TIME IF DUNIE COULD LINE WE CAN GET A NEW LINE FOR ABOUT TWO DAYS. AT THE PRESENT TIME WE ARE STILL LOOKING FOR ANOTHER ONE.

8-4-68

S/C 102 THE TMS OIL HAS BEEN COMPLETED, BUT
 ① THEY HAVE GONE OVER TROUBLE SHOOTING
 ON #29

② WE CAN NOT START TMS 30 UNTIL THE
 COMPLETION OF TMS 12 & 14.

S/C 103 AT THE PRESENT TIME THEY ARE STILL
 TUMBLING & CLEAN-UP.

S/C 104 THEY ARE POWER DOWN AT THIS POINT.

8/4/68 - HUBER

1. PANIC! S/C 103 CRYO. H₂ TK. CAVED IN.
 TECH. HIT FRAGILE OUTER VACUUM SHELL
 WITH ELBOW. PLOT IS AS FOLLOWS: TONITE!
- a. R&R TANK. EXPECTED TO BE COMPLETE HAMMON.
 - b. RETEST NEW TANK ON DR AS FOLLOWS:
 1. PNEUMATIC RETEST TO CONSIST OF
 CLOSING (OR VERIFYING CLOSED) REACTANT
 ULUS. THEN HE SNIFF SINGLE B-NUT
 AT 245 PSI. I'VE GREASED 245 PSI
 OPERATING PRESSURE WITH LAMAR
 FRANSEN (SAFETY) & 245 IS OK.
 AS LONG AS AREA CLEARED (20' RADIUS)
 DURING PRESSURIZATION & FOR 10
 MIN. STABIL. PERIOD AFTER & THEN
 KEEP PERSONNEL ^{IN AREA} TO A MINIMUM
 DURING LK. CHECK. OTHER GAS
 CHECKS CONSISTS OF INTERNAL
 LEAK CHECKS OF 2 Q.D.'S ON TK.
 USING A BUBBLE MANOMETER.
 THE 1 B-NUT IS ONLY PLUMBING
 CONNECTION TO TK.
 2. ELEC. RETEST CONSISTS OF
 VACUUM C/O USING A14-286, HTR. C/O
 USING -052, FAN C/O. H₂ TEMP. & QUAN.
 XDUKERS ARE NOT CHECKED IN DWNT.
 & WILL NOT BE RETESTED.

MAYNARD
 TER, HAS BEEN ALERTED TO OUR GSE
 NEEDS FOR ABOVE.

DR CURRENTLY HAS WORDS TO R&R TK. ^{FORUS}
 MARTIN WORKING RETEST PAPER - YAHN & ER
 SHOULD CONTINUE WRITING RETEST PAPER
 & SUPPORTING STACK (R&R).

I'LL GET MURPHY IN ON ZUD TO SUPPORT
 S/C 104 OCP 1201; NEWMAN WORKS 1201 ON
 3RD.

RIVERA
 COMING IN
 ON 2ND.

-OVER-

2. SIC 106 PUR'D. DOWN. WILL PROP. TAKE MOST OF 3RD SHIFT TO PUR. UP. WE WILL NOT HAVE A FIC TYPE ON 3RD FOR DCP 1518 (I.E., NEWMAN ON 104; DORNIS ON 103).
3. CORNWELL JUST REPORTED THAT F/C 2 F1 & F2 LINES PASSED LK. CHECK. DON'T KNOW FR. NOTES OR LOG IF F/C 3 F1 & F2 WERE CHECKED AT HI. PRES. YAHN WOULD HAVE DONE TEST IF DONE. TPS 20 (ATR) SHOULD BE READY TO GO ON 2ND.

SIC 104
PROP. 4.

8/4/68 2nd D. Rhodewalt

(1) Ref note 3 above — lines were rechecked by 2nd and F1 pegged on the 1000 scale how are these being sold on drop. Took the joint ~~off~~ apart and there was a severe misalignment in the free position. Please please get mockup there when these interfaces are made as I have requested before SEE PG 190

& find someone who can use the mass spec!

Report enclosed which I forwarded to Casson on F/C leaks.

(2) TPS 020 work held because of interference with TPS 012, →

(3) When Yahn going to days I don't know

(4) H₂ tank replaced - SCAT 066 moved from 2A (1518 suppt) to 2C to support H₂ TK retest.

(5) In regard to 1201 see note # 1 new line coming over @ 2200 hrs will try again! Disgusting!

(6)

3RD SHIFT MONDAY AUG 5, 1968

- 103 (1) DORNIS WORKING 103 LEAK CHECK. W. YAHN STAYED OVER UNTIL 3AM, TO ASSURE GOOD TURN OVER. D. NEWMAN ASSISTED WHILE WAITING LINES FOR 104. DELAYS FOR PARTS AND MASS SPEC PUMP UP.
- 104 (2) 104 LINE RETURNED FROM CLEANING ABOUT 0430. LEAK CHECK ON FUTURE OK.
- 106 (3) POWERED UP 1518 IN HOLD DUE TO 103 REQUIREMENTS - EQUIPMENT AND MAN POWER.
- 104 (4) TPS 020 FINALLY IN WORK ON 104. SOME DELAY FOR MASS SPEC BEING TAKEN FROM 103.
- 103 (5) QUESTION AROSE ON RE-TEST OF H₂ TANK. NOTE: PWT ON DR SIGNED BY T. BLACK TO RE-TEST PER DR. NASA Q.C. WAS ASKING ABOUT RE-TEST ON TPS.

Current FIC-Cryo. Shift & Work Assignments

	S/C 103 H ₂ Tank Retest	S/C 104 OCP 1201	S/C 106 OCP 1518
1st Shift 7:30AM-7:30PM	Martin Riveva	Johnson Cornwell	Farr
2nd Shift 7:30PM-7:30AM	Yahn Murphy	Newman	Darnis

Note: Above will be in effect until S/C 103 effort complete.

WJH
2/5/68

~~2 S/C 106 PURED. DOWN. PUR. UP WILL
 PROB. TAKE MOST OF 3RD SHIFT.
 WE WILL NOT HAVE A P/C TYPE ON
 ORD FOR~~

8/5/68 - HUBER

1. NOTE SHIFTS/ASSIGNMENTS ON OPPOSITE PAGE.
2. S/C 103 TR. RETEST PROCEEDING AS WELL AS CAN BE EXPECTED. THE 2 QD'S CHECKED ^{OUT} O.K. W. BUBBLE MACHINE. B-NUT LK. CHECK PERFORMED LAST NITE CURRENTLY BEING REPEATED (ULU. WAS CLOSED & NO PRES. TO TK.). NEXT TEST WILL BE HTR. C/O; MARTIN HAS THIS PORTION WRITTEN. HAVE YAHN/MURPHY WORK ON PAPER FOR TESTS TO FOLLOW HTR. C/O.
3. S/C 104 PROCEEDING IN OCP 1201. F1 & F2 FITTINGS TO F/C 2 CURRENTLY REPORTED O.K. → HAVE NEUMAN CHECK THEM AGAIN TONITE.
4. S/C 106 OCP 1518 RUNNING WELL. WERE IN SER. 8 LAST TIME I CHECKED. MIGHT HIT HOLD TONITE WHERE GSE HAS BEEN MOVED TO SUPPORT S/C 103.
5. S/C 104 TPS 20 (CM RCS ATR) RUNNING WELL. SHOULD BE COMPLETE TONITE.

8/5/68 2nd J. Rhodenat

(1) 1201 S/C104 N₂ line leaked @ RH bulkhead
 fitting - method of fix - rotating sleeve,
 re-toughening, rotating sleeve, fixed leaks but ~~then~~
 bent NASA Proj. Hektor R. out of shape. Plot
 now is to drive on check F1 & F2 (FL#2)
 note #3 (~~pg~~ pg 227) & install last cell. NASA
 QC may not give ok to install but H. Reese
 being contacted.
~~that~~ See note #4

(2) TPS 020 running good - finished and
 were running @ 2330 hrs

(3) Retest on 103 (F/C) held up before lunch
 due to cable problems

(4) Got direction from Larson to replace GN₂
 line (everyone was contacted on this even
 Houston). Talked him into letting us try
 another Voi shon lot but I doubt if this
 will work. If it leaks replace line!
 TVAR written to do GN₂ line + F1 & F2
 @ 2300 hrs. Voi shon replacement in work

(5) 1518 in seg 032 had some problems but
 were taking again @ 2300 hrs.

(6) Rec'd words @ ~~2400~~ 2400 hrs that 103
 SPS heater is being R & R'd.

8-6-68 3RD SHIFT V. BEAMAN

104 (1) TPS 20 DATA REVIEWED BY VIM & MANNY.
 THERE WAS A DOUBLE SPIKE ON FOUR OF THE
 ENGINES. CALLED M+TS FOR ASSISTANCE IN
 REVIEW OF DATA. WE UNDERSTOOD THEY CALLED
 MR STEADMAN WHO HAD LEFT HOME ABOUT
 6 AM.

103 (2) MANY PROBLEMS WITH TANK RE TEST.
 SCAT 066 LINES HAD TO BE BLOWN DOWN
 BECAUSE LINES HAD BEEN DISCONNECTED APPROX.
 5 HOURS LOST. IN HEATER CHECK AND HAVING
 PROBLEMS GETTING READ OUTS 0600.

104 (3) NOTE (4) PAGE 228 REF. LINE TAKEN TO
 185" LBS AND LEAKED WENT TO 195" LBS STILL
 LEAKED WILL HAVE TO REPLACE LINE.
 WILL POWER DOWN IN CONFIGURATION TO
 PROVIDE PURGE.

106 (4) FAW CHECKS 1518 COMPLETED. STARTING
 INTO SEG 44 LN 2 CHILL DOWN HTR
 CHECKS. TRYING TO WORK AROUND SCAT 066.

(5) NOTE 6 PAGE 228 HAD MANNY CHECK ON (MULLICAN)
 HEATER REMOVAL AND HE TOLD ME THAT ENG.
 HAD BEEN WORKING ON THIS PROBLEM FOR
 A COUPLE OF DAYS. THE DECISION TO
 CHANGE IT HAD ALREADY BEEN MADE
 BY PROJECT GROUP. THE TESTING CONSISTED
 OF RESISTANCE CHECKS AFTER REPLACEMENT,
 LATER ON WEINER AND FUJIKAWA WERE
 TALKING ABOUT IT AND THEY SEEMED TO BE
 FOLLOWING IT. MANNY WAS ALSO CALLED IN
 ON IT ON SUNDAY AND ASSISTED THE STAFF

8/6/68 - HUBER

1. DATA REVIEW OF S/C 104 TPS 20 CM RES ATR INDICATES BAD ULV. SIG. FR. SYS. B +P ENGINE. OTHER ENGINES O.K. BAD ENGINE MUST BE R&R'D. R&R'D WILL BE DURING 2 DAY DOWN PERIOD ON S/C PRIOR TO 0131. WE WILL NOT RETEST REPLACED ENGINE UNTIL AFTER 0131.
2. REFER TO MY NOTE 2 YESTERDAY & NOTE 1 ON 8/4/68. WHEREIN I REQUESTED THAT 2ND ^{3RD} SHIFTERS WORK ON S/C 103 RETEST PAPER ALONG WITH 1ST SHIFT. THEY HAVE NOT DONE SO (THEY TESTED ONLY) & WE HAVE BEEN HIT WITH SOME SERIAL HOLDS FOR PAPER WRITING. I'VE BEEN CHEWED OUT ON THIS THE LAST 2 DAYS. YOU HAVE AS MANY PEOPLE WORKING 103 AS I DO ON DAZE SO I EXPECT YOU TO PRODUCE SOME RETEST PAPER.
3. REPLACEMENT N₂ LINE CURRENTLY BEING BRASSED INTO S/C 104 TREE. WE WON'T BE ABLE TO CHECK IT UNTIL PWR. UP.
4. HTR. C/O COMPLETED ON S/C 103. FAU C/O CURRENTLY IN WORK. VAL-10U PUMP C/O WILL BE LAST.
5. S/C 103 SPS HTR. REPLACEMENT & C/O. WE (ATO SYS.) ARE TO CARRY JAIL ON THIS. IF ENGR. IS SLOWING OPERATION DOWN, RUN THEM OUT.

6. OCP 1518 IN HOLD ALL DAY LACKING SCAT 66 (IN USE ON S/C 103). SCAT 66 CAN NOW BE MOVED FR. STA. 2C TO 2A
7. S/C 104 0131, ^{SECTION II} SCHED. FOR THURS. AM.
8. WE WILL NOT TURN ON THE SPS HTRS. (CAPE REQUEST) PER SCHMUCK.

8/6/68 2nd D. Rhodewalt

Was told the following - haven't verified it myself.

- (1) S/C 103 SPS header c/o completed - all within tolerance - did hear words earlier about "high resistance" but Tyler said all ok - He & Thurman ran this tonight - mostly Thurman

S/C 103 Cyro c/o completed - I'm pretty sure this is true because I saw P/c eng. "smiling" - they can't normally do this

- (2) S/C 106 running 1518 seq 0+4 - slow start due to non-support from QCS

8-7-68 THIRD SHIFT BEAMAN

- 106 (1) 1518 HAD SEVERAL DELAYS ON LN₂ HOOK UP AND Q/D PROBLEMS. BACK RUNNING AFTER LUNCH
- 104 (2) MR ON H₂ LINE REPLACEMENT FOUND AT 0200 AM. LINE BEING REPLACED AT 0600 AM.
- 103 (3) S/M HOOKED UP FOR MOVE AT 0530 AM. MOVING TO NORTH AIR LOCK FOR PAINT (OVER)

103 (4) THE SPS PRESS X-DUCER SPOOD DAMAGED,
BELIEVED CAUSED BY WORKING IN AREA?
- MR-D.

104 (5) NEW ENGINE ~~ROLL A~~ + ROLL B
IN BME CHECK PICKED UP DR. ON
PROCEDURE. BUT MOVED ENGINE TO
GET INSTRUMENTATION PUT ON IT.

106 (6) EVERY EFFORT MADE TO GET 4225
ON THE LINE BUT BECAUSE OF LOW
PRIORITY VERY LITTLE COULD BE DONE.
INTERMITTENT Q.C. SUPPORT IN
ALL AREAS.

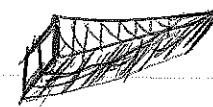
8/7/68-HUBER

1. OCP 1518-SK106 ONLY ITEM CURRENTLY
IN TEST. IN SEQ. 4A.

2. OCP 0131-SK104 SUPPOSED TO START
TOMORROW.

3. CM RCS ENGINE SCHED. OUT OF INSTR.
BONDING AT 8:30 PM TONITE. IT MUST
BE INSTALLED TO SUPPORT OCP 0131
BY TOMORROW AM. AFTER 0131.
REPLACEMENT
ENGINE RETEST WILL BE

4. SPOOD1 (HE PRES. X-DUCER) MAY HAVE TO
BE REPLACED ON SK103. MR HAS TO LOOK
AT IT AGAIN BEFORE DECISION IS MADE;
CAN'T GET INTO AREA RIGHT NOW.



8/7/68 2nd D. Phosmet

(1) 104 engine back on stroke &
partially installed @ 2200 HRS.

(2) 106 4225 into test @ 2100 hrs
running well.

Bill (3) In regard to DR 32 (V36 EPS) on
flex hose (RCS) inspection 4/106.
They could inspect (& bought off)
all hoses but - pitch say A, B.
These are buried fairly well & will
require wax etc removal to get
good inspection. I asked them to
hold off till AM - this may mean
retest if connectors are disturbed
to do RCS job. It's in your hands

(104) (+) At 2300 hrs 171 on 104 found
& broken c/b's 2 on Panel 5
2 on " 8
Panic!

3RD SHIFT 8-8-68

103 (1) M. SAVAZA FURNISHED TPE WITH LIST OF
TEST EQUIPMENT NEEDED TO WORK SPOOD1
IF DECISION IS MADE TO CHANGE IT.

106 (2) 4225 GOING AS PER DIRECTION.

106 (3) 1518 DORNIS RUNNING OK.

104 (4) REF ITEM 4 ABOVE DECISION MADE TO
PROCEED INTO 0131 WITH C/B'S AS IS.
(OVER)

8-8-68 CONTINUED

106 (5) 1518 IN SEQ 59.

104 (6) 4225 FINISHED SEQ 02 GOING TO 09.

104 (7) ENGINE WIRING STILL GOING IN DYNATUBES NOT HOOKED UP. QUITE A BIT OF EFFORT TO GO ON 0131.

103 (8) SPOO1 DECISION MADE FOR CONTINUITY CHECK TO SEE IF XDUKER CAN BE SALVAGED.

8/8/68

1. OCP 4225-SC106 SEQ. 1, 2 & 9 COMPLETED EXCEPT FOR QUAD C PORTION (QUAD C CURRENTLY REMOVED). REMAINDER OF OCP WILL BE RUN AFTER -075 RELEASED FROM OCP 0131-SC104.

2. OCP 1201-SC104 SHOULD GO BACK INTO TEST TONITE IN PARALLEL WITH -0131. HAVE NASA OK FOR PARALLEL OPERATION DURING PLSS IN PORTION.

3. ~~SC106~~ F/C SIMULATOR INSTL. WILL PROBABLY START TOMORROW. TPS WRITTEN & IN REVIEW. THE CURRENT XMAS TREE WILL BE USED WITH SIMULATORS. ALUMINIUM W1-SHAWNS HAVE BEEN APPROVED (TREMAN, BOUMAN & SOJA) FOR USE WITH SIMULATORS. A BRAND NEW VIRGIN XMAS TREE WILL BE "READY" FOR LIVE F/C INSTL.

4. WEEKEND O.T. SHEET ENCLOSED. PLEASE PUT NAMES IN SLOTS.

8/8/68 2nd D. Rhodewalt

(1) Bill - promised Walt ^{Yahn} Saturday off last week - he will work Sunday - please cover from lot. Left blank spot on O/T sheet

(2) S/C 106 F/C Simulators being installed. Problems were - flex hoses, plugs left in place after last leak check. Simulator cables in place since 1115.

(3) Bill - Talked to Walt later after our conversation & this is still firm. He can't work Saturday.

A) 0131 started @ 2200 hrs in Sect II. Quite an emotional pretest.

(5) Not done! Murphy spent all night on paper work to get in to test - did not get tech support till late in shift.

G. 104 1201 in hold for 0131 seq 04 worked paper all night.

8-9-68 THIRD BEAMAN
① OVERTIME FILLED OUT.

104 (2) 0131 RUNNING PERFORMED Seq 06 AND Seq 08. HAD DR ON CROSS READING 26 PSIA UP PER LIMIT 25 PSIA.

106 (3) PERFORMING TPS ON SIMULATORS.

104 (4) MANY PROBLEMS GETTING SET UP. COMPADRES SHUT DOWN TANK FARKU IN 1518. ~~WAS~~ MUCH PAPER WORK.

103 (5) \$P0001 ~~BE~~ FINISHED POTTING @ 0500. CONTINUITY CHECK

104 (6) 0645 0131 Sef Oil GOING VERY GOOD.

103 (9) C/M IN WEIGHT & BALANCE FIXTURE AT 0645. MORE WORK YET. THERE MAY BE A PROBLEM WITH MORTAR FIX. SOME FORWARD HEAT SHIELD GRINDING TO DO AROUND TOWER LEGS.

106 (8) 0645 NEED MOD SHEET FOR TPS 10 EPS STEP 5. 1518 LEFT "C" START IN THAT SCREWED UP VALVE CONFIGURATION.

8/9/68-HUBER

- 1. OCP 0131-SC104 RUNNING.
- 2. OCP 1201-SC104 RUNNING IN PARALLEL W. -0131. OCP 1201 WORK REMAINING PRIOR TO F/C INSTL. IS:

- a. F/C 1 FI LINE WAS REPLACED TODAY. NEW LINE BRAZED IN. ^{W-RAY OK.} LINE MUST BE PROOFED & BRASS JOINT LEAK CHECKED.
- b. ENTIRE N₂ LINE ASSY. NEEDS TO BE LEAK CHECKED (i.e., S/C END & F/C 2 & F/C 3 ENDS).
- c. F/C 2 FI FITTING LEAK. HAS BEEN SUBMITTED TO MR (BEKE LEUN) FOR ENGRG. RELIEF. RECORDED LEAK WAS 6.13×10^{-6} S/B $< 5 \times 10^{-6}$.

~~F/C 1 INSTL. ON S/C 106 CONstrained BY H14-115 F/C HANDLING TOOL BEING USED ON S/C 104. ONLY 1 TOOL AVAILABLE. NASA WILL NOT PERMIT US TO PUT SIMS. IN BY HAND.~~

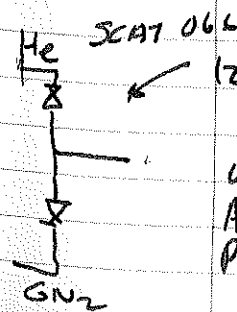
~~WARNING~~

- 3. F/C SIM. INSTL. ON S/C 106 CONstrained BY H14-115 F/C HANDLING TOOL BEING USED ON S/C 104. ONLY 1 TOOL AVAILABLE. NASA WILL NOT PERMIT US TO PUT SIMS. IN BY HAND.

8/9/68 2nd D. Rhodewit

F/C

- (1) Enclosed is the final break thru - as you can see it allows alum. noi shans + 175"#. All joints have been leak checked (replaced o-ring). See note 3 (COPY NOT ENCLOSED) REAL ONE REP. LIWD AND TORQUE VALUE CHANGED TO 125"HL ← This is not legal!



- (2) Bill - SCAT 066 has facility GN₂ + Helium patched into a common manifold. This caused probs today on 106 by GN₂ getting into Helium system - Asked TER group to get check valves into this unit. Please ask any shifts F/c types to watch this!

(3) F/C 2 FI MR was disapproved by MR (can't work - not a hardware prob.) Tried to get MR to buy DR but with referenced EO out they wouldn't. Went back replaced voinshun with Alim job & successfully leaks checked. Getting ready to proof joints @ 2300 hrs.

3RD SHIFT 8-10-68 BEAMAN

104 (1) F/C 1 IN PLACE ABOUT 0330. MUCH ARM WAVING ABOUT ON THE SPOT IMPOUNDER RED LINED EO. NOTE 1&3. LINES TORQUED AND ELECTRICALLY MATED AND POWER ON AT 0645.

106 (2) H14-115 AVAILABLE AT 0500. TPS 10 RUNNING SIMULATOR ON HOIST AT 0645 SHOULD BE IN PLACE AT 0700.

109 (3) S/M BEING HOISTED FOR TIPPING. U/M IN TROUBLE WITH PYRO CHECKS. FOUND TEST EQUIPMENT N.G.

3RD SHIFT 8-11-68 BEAMAN

106 (1) NEED TPS 10 MOD TO REMOVE H14-115 SO THAT QUAD CAN BE INSTALLED MONDAY.

1201 (2) HE PROBLEM STARTED AT 1730 WHEN 8-10-68
104 THEY WERE UNABLE TO DETECT HELIUM. AT FIRST THE 066 WAS SUSPECT PER NOTE 2ND PAGE 237. TER PATON TROUBLE SHOT PROBLEM AND FOUND THAT PROBLEM WAS WITH SCAT 069 THAT IS DOWN IN THE PIT. THE SCAT 069 HAS A MANIFOLD THAT TIES

THE FACILITY GN2 AND ~~HE~~ HE SYSTEM TOGETHER. A VALVE WAS FOUND TO BE OPEN ON IT AND IT PERMITTED THE FACILITY GN2 TO GET INTO THE FACILITY HELIUM. THE LINES THAT CONNECT HE TO THE SCAT 069 HAVE BEEN DISCONNECTED. CORNWELL WASN'T ABLE TO PROCEED ALL NIGHT BECAUSE OF THIS PROBLEM. DON PROCEEDED IN TO TEST AND VERIFY HELIUM FROM SEVERAL B NUTS BEFORE PERFORMING LEAK CHECK AND IS GOING IN TO HD UMBILICAL LEAK CHECK.

104 (3) PROPULSION HAD A PROBLEM ON NEGATIVE SM RCS ENGINES BEING APPROX RUN OVER 2 MINUTES. UP TO 4 MIN ~~HARD~~ BERG & SAVALA CALLED RON STEEDMAN AND HE SAID IT WOULD PROBABLY REQUIRE A MANAGER OR BETTER TO BUY IT. THE NET FIRING WAS BEING MONITORED BUT THEY WERE NOT AWARE THAT THE NEGATIVE NETS HAD BEEN ON TOO LONG. (SEQ 22 OF 0131)

104 (4) SHUT DOWN AT MIDNIGHT AFTER COMPLETING OCP 115.

103 (5) S/M GONE S/M CLOSING OUT FOR SHIPPING.

(OVER)

8/11/68 2nd D. Rhoades

- (1) S/C 104 1201 @ seq 07-075 @ turnover - told Walt to run as fast as possible - 0131 will shut him off when they blow umbilical @ seq 027 -
 Ran good all night finally p-icked up DR @ 08-018 - valve box regulators did not hold purge press on system - had to readjust.

8-12-68 3RD SHIFT

104 (1) 1201 COMPLETED AT 0355.
 0131 INTERRUPTORS BLOWN AT ABOUT 0100.

104 (2) 0131 RCS HAS TWO DR'S ONE CONCERNING FLANGE TEMP AND OVERTIME ON ~~SEP~~ RCS ENGINE. THE FLANGE MEASUREMENT PROBLEM HAS BEEN TRACED TO THE C14-397, AND THE OVERTIME DR WILL HAVE TO BE DISPOSITIONED BY ENGINEERING.

104 (3) PUSHING TO GET 1090 ON THE LINE. TPL IN WORK. ~~NEWMAN~~ FOLLOWING UP.

106 (4) J. BERG CHECKING ON 4225 TO PERFORM PORTIONS OF SEQ 09 ON QUAD C S/C POWERD UP AT 0345.

106 (5) SUPPORT FOR TPS 10 AVAILABLE AFTER LUNCH. AT 0630 FC SIMULATOR NR 3 BEING INSTALLED.

104 (6) NEARLY ALL OF PAR 4.2 HAS BEEN COMPLETED. CONTROL ROOM OBTAINED STACK BOOK TO TRANSFER STAMPS. ~~FF 9028-00121 GAGE OUT OF CALIBRATION~~
 1030 HAS BEEN PRINTED OUT FOR 1090 AND LEFT WITH 103 F.C. CREW.

106 (7) 4225 FOR PORTIONS OF SEQ 09 ON THE AIR. MANNA ON ~~IN~~ CONTROL ROOM.

(8) I WILL BE OFF TONIGHT. Jack. CHUCK WILL STAND IN FOR ME.

8/12/68-HUBER

1. F/C SIM. INSTL. TPS CONTINUING. F/C SIM. #2 & #3 INSTALLED & HAS TREE LINES MOCKED & TORQUED. READY TO START LK. CHECKS.
2. OCP 4225-SC106 SEQ. 1, 2 & 6 PORTION RELATED TO QUAD. C IN WORK TODAY. SHOULD BE COMPLETED BY END OF 1ST SHIFT.
3. OCP 1090-SC104 WILL NOT BE RUN UNTIL -0131 COMPLETED.
4. ENGR. WILL PROBABLY RELEASE "E.O." TO SAY COPPER UOI-SHAUS IN F1 & F2 AT 125" #, NICKEL UOI-SHAUS IN REST AT 175" #. DON'T LET THIS AFFECT F/C SIM. INSTL. ON SK 106; USE ALUM. AT 125" # THERE.
5. HAVE XTRA F/C MAN FOLLOW PRE-TEST FOR OCP 1510-SC106 & OCP 1090-SC104.
6. OCP 031-SC104 IN CIRCUIT INTERRUPTER TURNAROUND BETW. PLUGS-IN & -OUT. PWR. UP FOR PLUGS-OUT ESTIMATED FOR 4PM TUESDAY.

8/12/68 2nd Rhodenalt

(1) 106 Simul. Install. Rest of TPS released by S/E about 1700 hrs after J. Miller signed it off. Note. - The first page of the TPS still has original note about NASA approval for steps 1-61 only - however Miller signed all sheets so if really necessary on 3rd call J. Miller at home or point out his sign to QC.

TPS running ok were in step 53 about 2300 hrs

(2) 1510 S/C 106 - Masumoto said it was ok except for verification of Fig 1-1 which is held up for TPS on Simulator Installation

(3) 1090 (104) - Murphy drawing

8-13-68

S/C 109 THE ESTIMATED TIME IS ABOUT 8 HOURS LEFT FOR COMPLETING A RE-INSTALLATION OF THE INTERRUPTERS BEFOR RETURNING TO OCP 0131 SEQ 29,013

S/C 106 WHEN TESTING PER TPS-010 THEY FOUND THAT THE EVENT LIGHTS WOULD NOT LIGHT-UP AND ON #1 WAS PICK-UP AT STEP 57, F/C 2 He & F/C 2 O₂, S/C 2131, S/C 2134, WHEN EXECUTING A R-START THEY HAD BEEN TROUBLESHOOTING AND FOUND THERE WAS NO SIGNAL COMING FROM THE ACE EQUIP. THEY DID VERIFY THAT THE VALVES WERE OPERATING OK,

8-13-68 3rd SHIFT

S/C 104 AT THE PRESENT TIME THEY ARE BACK ~~TO~~ INTO THE TPS 010 TESTING.

8/13/68 - HUBER

1. ONLY WORK EFFORT CURRENTLY ON LINE IS F/C SIM. INSTL. TPS. F/C 1 INSTALLED BUT NEEDS LEAK CHECK FOLLOWING CONNECTOR MATING. PLEASE HAVE 1 F/C TYPE FOLLOW TPS & OTHER FOLLOW SECT. I OF OCP 1510-SC 106 & OCP 1090-SC 104.
2. SUGGEST PROP. TYPES SPEND TIME REVIEWING UPCOMING PLUGS-OUT.

8/13/68 2nd D. Rhodenalt

(1) 101 Re-test of two RCS engines - this turned into a paper hassle. MacClintock wrote a DR which really sounded like a shipping ticket & resulted in two problems.

1. Inspection quote. "did not recognize ATO DR'S"
2. The basic problem was that the DR was really worded like a shipping ticket - not discrepancy. This was apparently run thru their manager late 1st or early 2nd Shift who had them write two DR's that were twice as bad - they had such words as "no confidence in 101 engines requires this test" - this right before the 101 flight!

Problem was resolved by ~~re~~rewriting ~~the~~ ~~DR~~ with very loose wording, but enough to call a DR. Test has been in work all this shift - the above did not affect any portion of DR but first page.

(2) F/C TPS 106 going reasonably well for #3 priority - at stop 90 around 2300 hrs, Paul running

(3) 131 never started this shift - had big paper problem.

3RD SHIFT 8-14-68 BEAMAN

106 ① TPS 10 IN WORK. PRE TEST OF 1510 BEING COVERED BY GEORGE DORNIS.

104 ② HELD UP FOR GSE CABLE POLARITY, BACK IN TEST AT 0342. (0131)

③ TALKED TO BERG, SAVALA, DORNIS AND NEWMAN ABOUT COFFEE OR BEVERAGE ON CONSOLES, HOUSEKEEPING, WORK HABITS, TIME CARDS AND PUNCTUALITY FOR LUNCH.

104 ④ 0131 SEQ RCS ACTIVATION - DR ON EVENT LIGHT TROUBLE SHOOTING.

106 ⑤ 1510 IMPOUND COPY ESTABLISHED IN CONTROL ROOM. TPS 10 GOING PRETTY GOOD. SECTION 1 BEING READ OVER NET.

8/14/68 - HUBER

1. PROBLEM: S/C 104-06P0131. ON 3RD SHIFT LAST NITE A PROP. HE ISO. VLV. LITE IN CONTROL ROOM DID NOT LIGHT. PROBLEM WAS T/S BY J. BERG (ELECT. TYPES WERE BUSY ON ANOTHER PROD). BASED ON DATA ^(METER RDGS) HE TOOK BERG ENTERED INTERIM CONCLUSION THAT PIN ON JB22 (CIRCUIT INTERRUPTER) CONNECTOR) WAS BENT & SHORTING TO ANOTHER PIN. OTTE (CTC) SIGNED INTERIM C/A & SCHATZ SIGNED OFF CONNECTOR LOG O.K. TO DEMATE. DEMATING JB22 REQ'D. DEMATING 3 OTHER CIR. INTER CONNECTORS TO GET AT JB22. TO MAKE A LONG STORY SHORT WHEN JB22 WAS FINALLY DEMATED IT LOOKED BEAUTIFUL. MGMT. NATURALLY BECAME QUITE PERTURBED AT THIS POINT IN TIME. SUBSEQUENT T/S'ing ON 1ST INDICATED PROD. WAS NOT WITH JB22 BUT LAY INSTEAD WITH OPEN IN FLYAWAY UMBILICAL CONNECTOR. THE END RESULT OF ALL THE ABOVE IS AS FOLLOWS (PER CASSON'S INSTRUCTIONS):

1. IN THE FUTURE HAVE A ELEC. SYS. ENGR. WORK WITH OUR PEOPLE OR, AT THE VERY LEAST, HAVE AN ELEC. TYPE REVIEW T/S'ing & SIGN C/A.
2. PLEASE INSTRUCT OUR PEOPLE TO RECORD SPECIFICS ON DR'S ^{DOW JACK} (i.e., METER MAKE & MODEL, METER RANGE USED, PRECISE METER RDGS. RATHER THAN RECORDINGS LIKE _(over)

"VOLTAGE INDICATED", ETC.

3. PLEASE HAVE BERG PREPARE WRITUP OF HIS T/SING LAST NITE EXPLAINING WHY JOZZ PROBLEM CONCLUSION WAS REACHED. PLEASE LEAVE THIS ON MY DESK.

JACK
have Berg
do this
tonite.

2. OCP 1510-5C106 FINALLY GOT INTO SECTION II ABOUT 3PM. CURRENTLY IN SEQ. 4.

3RD SHIFT BEAMAN 8-15-68

104 ① J. BERG HAD ASSISTANCE FROM PAUL LISLE AND PHIL OTTE DURING THE TROUBLE SHOOTING ON DR #31. THE CONCLUSION WAS REACHED AFTER CONSULTING WITH THE ABOVE GENTLEMEN. THE DAY SHIFT CTC ALSO ON BOARD FOR THE DECISION. THE OHM READINGS TAKEN WERE ON THE 1K SCALE AND ~~SA~~ THIS WAS IN ERROR. THE INTERIM CONCLUSION WAS THAT PINS 38 & 39 WERE SUSPECTED TO BE SHORTED. LATER IN THE DAY A JACK SCREW WAS FOUND TO BE FAULTY ON P 822 AND MAY HAVE PERMITTED AN OPEN ACROSS THE CONNECTOR. ~~BY~~ THE LIGHT NOW WORKS AS IT SHOULD NOW, HOWEVER, THERE MAY BE SOME PROBLEMS BEHIND THE DR.

106 ② 1510 TROUBLE SHOOTING DR 7 SUSPECTED LEAKY PURGE VALVE ON F.C. SIM. #1.

104 ③ PICKED UP DR 32 ON SEQ 140 ON F.C. TB SUSPECT CONFIGURATION PROBLEM FROM 1201.

104 ④ THIRD SHIFT DID NOT WORK ON DR 17 BUSY ON 106 1510.

8/15/68-HUBER

1. OCP 0131-5C104 RUNNING. ESTIMATED COMPLETION SATURDAY MORNING.
2. WEEKEND O.T. SHEET ENCLOSED. PLEASE FILL OUT.
3. OCP 1510-5C106 COMPLETE & CURRENTLY DEACTIVATING. THIS WILL BE FOLLOWED BY REMOVING SIMULATORS PER TFS #10. DR'S HAVE BEEN REVIEWED; NONE CONSTRAIN SIM. REMOVAL. AFTER SIMS. ARE REMOVED WE NEED SOME S/K LINE REPAIRS (BENT ELBOWS, DINGED LINES, ETC.) & RETEST (PROOF REPLACED LINES & SNIFF ANY NEW BRAZE JOINTS). MARTIN WILL IDENTIFY THESE REPAIRS IN S/K 106 SYS. LOG. LET'S KEEP CHARGING & TRY TO COMPLETE ALL THIS BEFORE XMAS TREE IS READY.
4. AS YOU PROBABLY KNOW DECISION HAS BEEN MADE TO TURN RCS ENGS. OFF IMMEDIATELY WHENEVER RCS JET DRIVER WARNING LITE COMES ON. ITC HAS A WRITUP DESCRIBING THIS & MANY TURNS HAVE BEEN WRITTEN TO POINT OUT CRITICAL TIMES IN OCP 0131-5C104 PLEASE MAKE SURE PROP. TYPES. ON YOUR SHIFTS REALIZE WHEN LITE COMES ON THEY SCREAM & ENGINES ARE TO BE DEACTIVATED IMMEDIATELY.

5. PLEASE BE INFORMED THAT AFTER OCP 0131-SC104¹⁵ COMPLETED THE S/C WILL IMMEDIATELY BE POWERED BACK UP FOR 2-3 DAYS OF RETEST/TEST. ALMOST ALL THIS TESTING WILL BE FIC-PROP. AS FOLLOWS:

Configuration
22 on 3 down

1. RUN OCP 1090-SC104
2. RETEST CMRCS ENGINES (CONSISTS OF D/W TUBE LEAKAGE, VLV. SIGS, INJECTOR VLV. LEAKAGE).
3. PERFORM MCR 7510 (i.e., ADD FILTER TO FCSM WIRING, ^{2 days} CHECK IT OUT, RE-RUN SEQ. 6 OF OCP 4128).

8/15/68 2nd D. Rhodenalt

(1) F/C 106 performing deactivation (Seq 011) @ turnover

Into F/C simulator TPS about 1900 hrs. - had GST valve box (O₂) prob. LV22 chattering. At step 166 on TPS - just ready to start pulling simulators @ 2300 hrs.

(2) 0131 (104) holding @ step seq 045 due to ECS glitch (chilldown)

Seq 045 completed @ 2000 HRS - proceeding without flaps.

At seq 047 2000 hrs → running good

(2) Murphy reviewed DR's against ~~1201~~ installation. it turned out that DR 17, 18 remain to be worked (replace lines, leak check) he has written out rough draft of test req'd & will forward to D. Newman on 3rd to work after sim removal.

2/6

(3) On vacation next 2 weeks - will return Sept 3. Rick Dickey filling in for me.

(4) Had ~~opport~~ opportunity to watch engine firings in 0131 seq 047. With the window on recorder & warning lite it worked beautifully. Can't see how there will be any glitches from excess engine on time if all SEC's stay awake.

3RD SHIFT 8-16-68 BEMMAN

106 (1) ALL THREE SIM ARE OUT. FAIR TICKET TO REPLACE LINES SIGNED OFF. LV22 CHATTERING.

104 (2) IN ACE HOLD ALL SHIFT.

107 (3) OPELL SAID SECTOR 4 PRETTY BAD SHAPE

104 (4) D. NEWMAN CALLED YOU ON PROBLEM OF DR 12 1201.

8/16/68-HUBER

1. APPARENTLY DO TO A SURPLUS OF S/C AT KSC WE WILL BE CUTTING BACK ON DAYS/WK & HRS/WK. WORKED. S/C 104 IS STILL A 7 DAY/WK. BIRD & S/C 106, 6 DAYS/WK. BUT CASSON DIRECTED NO FIC ACTIVITY TOMORROW ON S/C 106. S/C 107 SUPPOSED TO BE A ^{DAY} 5/WK BIRD.

JACK CONCERNING ^{NO} FIC TOMORROW ON S/C 106, I CALLED NEUMAN & TOLD HIM NOT TO COME IN TONITE; HE'S STILL SCHED. FOR SUN. I HAVE CANCELLED 1ST SHIFT FIC ^{S/C} 106 EFFORT. DON, PLEASE CANCEL 1 FIC TYPE ON 2ND SAT. (I.E., BRING 1 ONLY IN). ALSO PER CASSON'S DIRECTION NO ONE IS TO WORK MORE THAN 8 HRS/DAY WITHOUT SPECIFIC SUPV. APPROVAL & SUPV. MUST BE ABLE TO EXPLAIN NEED FOR MORE THAN 8 HRS. IN EA. CASE. BECAUSE OF THIS I ISSUED ENCLOSED IL TO ALL PROP/FIC TYPES.

2. OCP 0131-Σ104 STILL IN TEST.

3. TPS 010 (FIC SIG. REMOVAL) COMPLETE. SHOP CURRENTLY RER'ING. DAMAGED SECTOR III LINES.

Turnover info { 104 full suppt. over weekend
5015, 5056 only over weekend S/C 106 (Sat only)
NO 107 activity
P/C 1090 after shift team 3 deep select.

8/16/68 2nd J. Rhoades

(1) Brazing work fell thru crack tonight on fuel cells (S/C 106) - Brazing machine broke down.

F/C Types spent most of night working 104 1201 DR's.

Sect IV closed out & sealed @ 2400 hrs

(2) 0131 plugging along - Went thru Seq 053 but had seq prob - one engine had a random firing - nothing serious but may have to rerun that portion

(3) DR's on 1201 are now in good shape DR #17 needs to be done in control room TPE has promised a chance to run it on 3rd.

3RD SHIFT 8-17-68 BEAMAN SECTOR 106 (1) GEORGE DORNIS IS IN AND ~~GOOD~~ BY ALL COVERED UP AND SEALED.

104 (2) STILL IN 0131 SEQ 053.

(3) GEORGE STILL CONCERNED ABOUT DR 12 OCP 1201.

8/17/68 - HUBER

1. DON: DECISION TO NOT SUPPORT FIC EFFORT ON SK 106 TURNED AROUND TODAY AT NOON BY LASSON. CORNWELL CURRENTLY SUPPORTING SIC 106 SECT. IV PURGE REQMTS. I CALLED MURPHY; HE WILL COME IN ON 2ND TONITE TO PICKUP FR. STEVE TIL MIDNITE. NOTE → SK 106 FIC EFFORT WILL CEASE AT MIDNITE TONITE (NO EFFORT SUN.) & SECT. IV SHOULD BE SEALED OFF.
2. OCP 0131-SC104 HUNG UP ON 1ST SHIFT IN SEQ. 55. SEEMS THAT REPEATED ACTUATION OF RCS HTR. SW. GLITCHES EVERYTHING.
3. HAVE OTHER ~~PRE~~ FIC TYPE FOLLOW OCP 1090 PRE-TEST EFFORT.

2ND SHIFT 8/17/68 R. DILEY

1. SC 104. RCS DEACTIVATION SEQ 58 OCP 0131 COMPLETED 1900 HRS. SPS DEACTIVATION NOT PERFORMED - BLANKET PRES LEFT ON FOR CR 0006 XDUCR REMOVAL. OCP 1090 PRETEST CONTINUED.
2. SC 106. SEC. IV PURGE REQUIREMENTS MAINTAINED THRU OUT SHIFT. SECTOR TO BE SEALED OFF AT END THIS SHIFT.

8-19-68 - THIRD SHIFT DEWMAN

- (1) AMES RUNNING FCSM CHECK.
- 104 (2) HAD CALL FROM OTTB THAT ~~THE~~ EVERYTHING WAS ~~PRE~~ READY FOR TPS 28 BUT BERG WASN'T IN. I HAD D. NEWMAN LOOK IT OVER AND WE FOUND THAT WE HAD TO HAVE SCS AND COOLING ON. STEPS 1+2 WERE WORKED HOWEVER. I CALLED B. HARRISON TO SEE IF HE COULD COME IN EARLY BUT HE VOTED ~~IT~~ AGAINST IT AND I'M GLAD HE DID. ECS WAS HAVING TROUBLE GETTING COOLING ON.
- 104 (3) 1090 - LOOPS 1+2 PASSED VALUUM DELAY AT 0630 HOPE TO PASS ALL THREE AND FILL BY 0700.
- 106 (4) HELD UP FOR ~~SEP~~-S14-176 - 1201 SECTION I IN WORK.
- (5) NEWMAN WISHES TO RETURN TO DAY SHIFT.

8/19/68 - HUBER

1. ON S/C 104:

- a. FCSM ATR TPS COMPLETE.
- b. VLV. SIGNATURE TPS COMPLETE BUT -P ENGINE FAILED VLV. SIGS. CURRENTLY BEING R&R'D.
- c. HOLD OFF ON GAS INJECTOR FLOW TPS UNTIL NEW -P ENG. INSTLD. & VLV. SIG. OK.
- d. OCP 1090 RUNNING IN SEQ. 6. PICKED UP DR SAYING FC 2 3/8" W/G FITTING AT FC INTERFACE IS LEAKING (NO DRIPPING - JUST DAMP). CIA. WAS TO GO TO MAX. TORQUE (290"#), WIPE JOINT CLEAN & MONITOR IT. CROSS YOUR FINGERS. LET'S CONTINUE WITH OCP WHILE SEEING IF THIS CIA WORKS.

HAVE YAHN-2ND NEWMAN-3RD FOLLOW THIS

2. S/C 106.

HAVE MASON-2ND DENIS-3RD FOLLOW THIS

- a. REPAIRS OF SECT. IV TUBES STILL IN WORK. CONTINUE AS DESCRIBED IN SYS. LOG.
- b. NO PROP. EFFORT.

2ND SHIFT DICEY

1. SC104

-P ENG OUT BY END OF SHIFT

OCP 1090 CONTINUING - BUT LEAK SHOWS CONTINUOUS SEEPAGE -

2. SC106 - BRAZED "T" REWORK DR #17 COMPLETED

TURNS OUT MFG DID NOT LEAK CHECK XMAS TREE ASSY

DR #18 WORK CONTINUING.

3RD SHIFT 8-20-68 BEAMAN

104 (1) DEBATE ON TORQUEING "B" NUT, ON W/G LEAK. SUBMERSION FREEZE ETC.

- D. NEWMAN GATHERING INFO ON WHAT HAS TO BE DONE TO CHANGE ALL THREE CELLS.
- B. DORNIS CAME IN LATER AND SUGGESTED CONNECTING WET FLEX LINES TO FC #3 AND MOVING IT OUT OF POSITION FOR ACCESS TO F8 ON F.C. 2. FIX THAT THEN REPLACE FC 3 AND REMOVE WET FLEX LINES AND BLEED AT "B" NUTS.
- G. STEWART CALLED FLORIDA TO ASK THEM HOW THEY FIXED F8 ON FC#3. THEY FROZE OUT FITTING TRY POURING LN 2 DIRECTLY ON FITTING.

104 (2) -P SYS A ENGINE IN INSTRUMENT LAB. SCHEDULED FOR OVEN AT ⁰³³⁰0400 AM OUT ABOUT ^{1100 AM}NOON. V. BERG WRITING TPS FOR RE TEST OF PITCH ENGINE ONLY HE WILL GIVE TO DAZE FOR THEIR PURVIEW

104 (3) 1090 SK 2D 176 - TER GROUP WANTS THE BLUE GOOSE SO THEY CAN CLEAN IT UP. TOLD THEM THAT WE MAY NEED IT FOR DRAINING.

8/20/68 - HUBER

1. CONTINUE PRESSURE TESTING SIC 106 SECT. III LINES PER TPS # _____
- 2.

2ND SHIFT 8/20 DICEY

SC 104 PROP. - SYSTEM
 PROP TRIED TO START/TUBE BLOWDOWN (+H/C)
 ON - P ENG R/R EFFORT.
 DID NOT GET ANALYZER UNTIL END
 OF SHIFT (APPARANTLY ASKED FOR BY NASA)
 AS OF END OF SHIFT LOOKS LIKE
 BRAZED FLANGE REFINISH ON S/N 203
 ENG WILL GO ROUTE OF METS DR.
 (IE CLEAN AND PASSIVATE)

FC AS OF ~~2100~~¹⁹⁰⁰ HRS DECISION IS TO
 FLUSH & PURGE FC 2
 CONT. 1090 -

ALSO TRYING TO DECIDE PLAN OF
 ACTION FOR FLUSH & PURGE
 NOTE ALL 3 FC COMPRESS. GOOD
 DECISION SEEMED BASED ON 'DISCOVERY' THAT
 COPPER VOISHAN WAS NOT ACCEPTABLE
 AND THAT SPILLAGE AND AIR INTRODUCTION
 WERE QUITE POSSIBLE

SC 106
 FC TPS IN WORK ON PROOF & L/C BRAZED
 FITTINGS.

3RD SHIFT BEAMAN 8-21-68

104① - P ENGINE

PASSIVATION REQUIREMENT. REQUIREMENT
 FOR 50/50 NITRIC ACID AND H₂O. COULD
 NOT FIND PROPER ACID. SEARCH MADE
 MANY PLACES. MATS WOULD NOT
 USE ANY OTHER TYPE UNLESS CLEARED
 BY ROCKET DYNE.

DR 399 - DETERMINE THE MOISTURE
 CONTENT OF R.C.S. SYSTEM.

COLLECTING PARTS ALL NIGHT LONG.
 0330 DYNATUBE FITTINGS AVAILABLE
 STILL COLLECTING PARTS - VALVES ETC.
 WEATHERBY RE WORDED DR BECAUSE
 ORIGINAL IMPOSSIBLE TO WORK.
 HYDROCARBON ANALYZER ON STATION
 QUESTION IS IF IT IS READY TO GO.
 HYGROMETER ~~TO BE~~ MADE AVAILABLE.
 IS AVAILABLE @ 200

104② NEWMAN WORKING ON PREPARATION FOR
 DRAIN AND FLUSH OF FC #2.

MR MALBY FROM SMP CALLED IN TO
 PREPARE FLUSHING CART (DE IONIZED H₂O)
 HE STATED THAT A CULLIEM WATER CART
 WOULD BE AVAILABLE. IT WAS DECIDED TO
 USE THE OLD OIF FOR ALCOHOL FLUSH BECAUSE
 THERE WEREN'T ANY ALCOHOL FLUSHING CARTS
 AVAILABLE SERVICED WITH ALKY. WE LATER
 FOUND ONE THAT STATED ^{OF} IT ~~WAS~~ THAT
 IT WAS SERVICED WITH ALCOHOL.

MR MALBY CALLED IN TWO OF
 HIS PEOPLE TO PREPARE A PROCEDURE
 FOR OPERATING THE FLUSHER. TER
 WAS IN THE MEETING AND ARE AWARE
 OF OUR REQUIREMENTS. TOOK DON'S
 LIST OF EQUIPMENT AND HAVING IT TYPED.

NOTHING HAS BEEN DONE ON THE
STACK.

106 (3) GEORGE WORKING ON LEAK CHECK TPS
ON FITTINGS.

(4) D. NEWMAN WORKED OVERTIME TO COVER
TURNOVER.

8/21/68-HUBETZ

1. S/C 104 LEAK ON F/C 2:
SPENT ENTIRE DAY GATHERING NEC.
EQUIPMT. & WRITING UP OUTLINE
OF DRAIN, FLUSH & DRY PROCEDURE.
WORK IS TO BE DONE ON LEAK
DR, WE WILL SUPPLY ALL WORDS
(SMD TYPES MANNING DEIONIZED
H₂O UNIT & HYGROMETER, ETC. WILL
WORK TO OUR DIRECTION). SINCE
LITTLE F/C EFFORT (AID SHOP ON OCP 1201
PRE-TEST) WILL BE REQ'D. TONITE,
HAVE ALL F/C TYPES WORK ON
S/C 104.

2. S/C 104 - P RCS ENG. DRYNESS &
INSTL. IN WORK.

3. PUR. WILL BE TURNED OFF 104
AT 8 AM TOMORROW. WE WILL
HAVE TO KLOGE PUR. INTO 5/M
TO OPERATE W/G PUMPS & RAD.
BYPASS VALV. AS REQ'D. FOR
FLUSHING & DRYING.

8/21/68 2ND DICEY

SC104 F/C

FLUSH + PURGE DR IN WORK
WATER UNIT HOOKED UP
SAMPLES SUBMITTED 2245 HRS FOR
CONDUCTIVITY + PART

3RD SHIFT 8-22-68

SC104 (1) SAMPLES WERE CONSIDERED BAD BECAUSE OF
THE - CHLORINE AND PH FACTOR ~~AS WELL~~
~~AS~~ WE ARE SWITCHING THE O₂ TO H₂O
AT ABOUT 0100 - MALBY WAS CALLED
BUT NO HELP. ALSO A QUESTION ABOUT
THE LIGHT ON THE UNIT OF WHETHER IT
SHOULD BE ON OR OFF. ALL IN ALL
THIS WAS A REAL NICE THING TO
ARRIVE ON. TRIED TO GET ENGINEERING
TO GO WITH ALCOHOL ALONG BUT NO
LUCK. - POWER ON

SC104 (2) DR #55 CONCERNING RCS HEATER GLITCH.

APPARENTLY THERE WAS A MEETING ON
THE TROUBLE SHOOTING REQUIREMENTS
FOR THIS DR DURING THE DAY SHIFT.
I WAS COMPLETELY UNAWARE OF THE
RCS REQUIREMENTS TO SUPPORT THIS
EFFORT. SO THE FOLLOWING TRANSPIRED.

AT 0215 THE VEHICLE WAS POWERED
UP.

AT APPROXIMATELY 0230 ~~EPS~~ ~~ENGINEERING~~
BERG WAS CHECKING THE CONTROL ROOM
TO VERIFY THAT THE RCS WAS SAFE FOR
CONTINUED PITCH ENGINE INSTALLATION. AT
THE SAME TIME SOME EPS TYPES WERE
ABOUT TO RUN DR #55 AND ACTIVATE
THE RCS SYSTEM. BERG WAS SURPRISED

PHIL OTE WAS SURPRISED AND SO WAS EVERYONE ELSE.

DR #55 ALSO REQUIRED THE ACTIVATION OF THE SCS SYSTEM AND BILL SHAW ~~WAS~~ HAD NO INFORMATION ON IT.

~~IN~~ BY ABOUT 0830 WE HAD A DISCUSSION WITH CURITON CONCERNING THE ACTIVATION REQUIREMENTS.

IT WAS DECIDED THAT THE PITCH ENGINE INSTALLATION COULD BE HELD UP AND ASSURE THAT IT WAS ELECTRICALLY AND PNEUMATICALLY SAFE FOR DR REQUIREMENTS.

THIS DECISION TO HOLD UP ENGINE INSTALLATION WAS MADE KNOWING THE VALVE SIG REQUIREMENTS AND THE OTE IMPACT, HOWEVER, THE 24 HOUR SKEP DID NOT HAVE VALVE SIGS REQUIREMENT ON IT.

WHILE CHECKING FOR SAFING OF ENGINE ON THE STACK IT WAS NOTED THAT THE FLOW SENSORS WERE NOT INSTALLED. THE LTC WOULD NOT RUN THE RCS ENGINES WITHOUT THE FLOW SENSORS SO DR 55 WAS PUT IN A HOLD AND THE RCS ENGINE INSTALLATION PUT BACK IN WORK WHILE SENSORS WERE BEING INSTALLED.

104 (2) WORKING MOST OF NIGHT ON GETTING H₂O INTO -019. AT 0700 STILL PUMPING OUT ALCOHOL. ORIGINAL ESTIMATE OF SWITCH OVER WAS ABOUT 20 MIN.

104 (3) ELECTRICAL PEOPLE HAVE NO WORD ON KLUKE FOR W/G PUMPS AND BYPASS VALVE.

104 (4) - PITCH ENGINE WIRED TO TB LESS XRAY. DYNATUBES SHOULD BE HOOKED UP BY END OF SHIFT. FLOW SENSORS FOR DR 55 HAVE BEEN LOCATED BUT STILL HUNTING THE CABLES.

8/22/68-HUBER

1. ON SIC 104 FK:

WORKED ALL 1ST SHIFT GETTING ^{DISTILLED} H₂O INTO -019 & GETTING GOOD SAMPLE AT SIC INTERFACE. NOW READY TO START H₂O FLUSH.

PLAN OF ACTION IS AS FOLLOWS:

- a. PERFORM H₂O FLUSH USING -019. LIQUID NOW ISSUING FROM -019 IS DISTILLED H₂O & SOME ALCOHOL. WE HAVE A GOOD LEVEL II SAMPLE DOWNSTREAM OF FILTER (i.e., AT SIC INTERFACE). DON'T SWEAT THE ALCOHOL IN H₂O AS WE WILL USE ALCOHOL LATER. TERMINATION OF H₂O FLUSH IS ^{TO BE} DETERMINED BY QUANTITY OF H₂O FLUSH (6 GALS. PLUS) & NOT BY ANY SAMPLES (i.e., DON'T TAKE SAMPLES AFTER H₂O FLUSH). THE CULLIGAN UNIT IS ON LEVEL 4 AS A BACKUP UNIT YOU HAD LAST NITE WAS DEFECTIVE. IF -019 FAILS YOU CAN SWITCH TO CULLIGAN UNIT; YOU WILL NEED A GOOD DEIONIZED SAMPLE FROM UNIT OUTLET & A ^{GAP} LEVEL II SAMPLE DOWNSTREAM OF FILTER

- A S/C INTERFACE BEFORE YOU USE IT.
- b. AFTER H₂O FLUSH COMPLETE SWITCH TO ALCOHOL FLUSH. THERE ARE 2 W-G FILL CANS IN BME BEING SERVICED W. ISOPROPYL ALCOHOL - HOWEVER IF THEY ARE NOT READY (i.e., GOOD LEVEL 2 SAMPLES FR. CAN) WHEN H₂O FLUSH COMPLETE IMMEDIATELY START CHANGING -DIA OVER TO ALCOHOL. RUN PRED. OF CANS & -DIA IN PARALLEL (DON'T TURN EITHER EFFORT OFF) & THEN USE WHICHEVER IS READY 1ST. CRITERIA FOR -DIA BEING O.K. FOR ALCOHOL FLUSH IS GOOD LEVEL 2 SAMPLE AT S/C INTERFACE (NO CHEM. ANALYSIS REQ'D.) CRITERIA FOR TERMINATING ALCOHOL FLUSH IS ALSO QUANTITY OF FLUSH & NOT SAMPLES (i.e., DON'T TAKE SAMPLES).
- c. S/C 104 PWR. WILL BE TURNED OFF AT MIDNITE. EPS TYPES WILL KLUGE PWR. INTO CSM UMBILICAL FOR W-G PUMPS & BYPASS VLUR.
2. WHEN S/C 104 PWR. DOWN AT MIDNITE C14-075 WILL BE TURNED OVER TO S/C 106 FOR RUNNING OLP 4225 - SC106.
3. WEEKEND O.T. SHEET ENCLOSED. PLEASE FILL IN NAMES & RETURN.

8/22/68 2ND SHIFT DICEY

SC104 - RAN WATER FLUSH FC2 ALL SHIFT EXPECT TO BE SWITCHED OVER TO ALCOHOL IN S14-D19 BY 3RD SHIFT SC PWR DOWN AT BEGINING OF SHIFT SO USED SETUP PWA AT UMB. RAN 7 WATER CYCLES.

PROP -
COMPLETED -P ENG INSTALL
S/O 075 2130 HRS

SC106 F/C -
SUBMITTED TPS FOR 1201 SECT II

PROP -
4225 SET UP RUNNING. HAD TO R/R A COUPLE OF QD'S. WAITING 075. GOT 075 2130 HRS 4225 RUNNING.

3RD SHIFT 8-23-68 BEAMAN

SC104 ① W. VAHN STAYED UNTIL ALCOHOL FLUSH WAS COMPLETED. NO SAMPLE WAS TAKEN OF ALCOHOL AFTER FLUSH. PURGE THROUGH HEATER CART STARTED AT 0330. NO HEAT WAS APPLIED BECAUSE THE SPEC DID NOT CALL FOR IT NOR COULD WE GET AN ENGINEERING REQUIREMENT. GETTING READY NOW TO HOOK UP FOR VACUUM PURGE. MAN TO RUN HYGROMETER IS ON STAVE, HOWEVER, HYGROMETER IS NOT EFFECTIVE FOR ALCOHOL VAPOR. NO DRYNESS LEVEL OR DEW POINT REQUIREMENT IS IDENTIFIED FOR

SYSTEM. PURGE STILL SMELLS LIKE
ALCOHOL.

104 ① PITCH ENG. INSTALLATION COMPLETE.
LESS Q FELT.

106 ③ 4225 RUNNING PRETTY WELL DOING
DYNATUBE LEAK CHECKS IN SEQ 03.

④ COULD NOT FIND YOUR ENCLOSURE
OVERTIME

SAT
AMES
BERG

SUN

CRYO
NEWMAN
DORNIS

NEWMAN

106 ⑤ 1201 STILL WORKING DR'S FROM ITI
IN SECTOR 4. AFTER HELPING D NEWMAN
DORNIS TRIED TO GET DR 7 GOING
BUT ~~HE~~ COULD NOT OBTAIN TECH OR
MASS SPEC.

8/23/68-HUBER

1. SIC 104 FC W-G PURGE STILL CONTINUING.
ALCOHOL VAPORS STILL EVIDENT IN
EXHAUST. PUT BUBBLE SOLUTION ON
B-NUT TODAY & VERIFIED IT BUBBLED.
WHEN ALCOHOL VAPORS CEASE
SWITCH OVER TO HE383 VACUUM
PUMP & SEE WHAT VACUUM YOU
CAN PULL & CHECK DELAY (WRAP
LEAKING B-NUT WITH TAPE ^{PUTTY} FOR
THIS).

2. OCP 1201-SC106 IN PRE-TEST. TRY
TO GET INTO SECT. II TONITE.

3. OCP 4225-SC106 HUNG UP TODAY
WITH LEAKING O-RING IN DYNATUBE.
SEAL CURRENTLY BEING CHANGED.
WILL GO BACK INTO SEQ 3 AFTER
NEW SEAL IN.

8/23/68 2ND SHIFT DICEY

SC104 - FC2 REPLACEMENT LINE MOCK UP
IN WORK

NOTE - ORIGINAL LINE TUBE BEND ANGLE
TO Φ I/F FITTING 5-10° OFF.
WHICH WOULD COMPOUND MISALIGNMENT

SC106 - 1201 A LITTLE SLOW -
TOOK ALL SHIFT TO GET 1 CELL
OFF FLOOR AND INTO DOLLY.
CLEANED UP BOTTOM

4225 RUNNING WELL SINCE DYNATUBE
FIX AT 1700 HRS

8-24-68 THIRD SHIFT BEAMAN

106 1201 G. DORNIS WORKED ALL SHIFT TRYING TO CLEAR SECTION I. HOW IN HELL THEY GOT THE FUEL CELL IN AHEAD OF 1201 I DO NOT KNOW. 2ND SHIFT DID NOT HAVE ~~TO~~ ANY TECH SUPPORT. BECAUSE OF ~~IT~~ THERE WAS NO PRESSURE PANEL AVAILABLE SEVERAL TVAR'S HAD TO BE GENERATED. IN ADDITION WE LOST A TECH LATER IN THE SHIFT.

104 LINE FINALLY INSTALLED (VERY VERY DIFFICULT) AND LEAK CHECKED OK. BACK TO PURGE AND VACUUM.

106 4225 RAN PRETTY GOOD. FOUND ONE O RING LEAK AND FIXED. FINISHED SEQ 04 AND INTO SEQ 05. ALSO ONE INSTRUMENTATION PROBLEM.

8/24/68-HUBER

1. SIC 104 FIC PROB.

TEST SETUP CURRENTLY BEING CHANGED TO SUCK ON BOTH ENDS OF LOOP W. HE 383. DR TO BE SETUP TO PUT GAGE "AT FAR END OF LOOP" & TAKE RDGS. & TO RUN VACUUM DECAYS. DO SO ABOUT EVERY 2 HRS.

2. OCP 1201-SC106 STILL NOT STARTED. KEEP PUSHING CIC FOR REQD. TECHS.

3. OCP 4225-SC106 IN SEQ. 6. MARGINAL AS TO WHETHER IT WILL COMPLETE TONITE.

8/24/68 2ND SHIFT DICEY

SC106 - 4225 RUNNING ALL SHIFT SECURED FOR PWR DWN

SC-106
1201 - COMPLETED SEQ 01, 02, 03.

SC104 - CONT EVAC ALL SHIFT

8-25-68 8RD SHIFT BEAMAN

104 ① VACUUM DECAYS LOOK PRETTY GOOD. CONTINUING EVACUATION WHILE GETTING EQUIPMENT ARRANGED. MOVING MASS SPEC. ETC. ON TO FOURTH LEVEL TO SUPPORT LEAK CHECK PER DR 97.

106 ② WILL WONDER NEVER ~~STOP~~ ^{CEASE} 1201 IN WORK.

106 ③ SPS ENGINE INSTALLATION IN WORK.

8/25/68 2ND SHIFT DICEY

SC104 - SHIP DECAY REPORTED GOOD BY
 DAY SHIFT < 200 μ 15-MIN.
 CONSOLE DECAY QUITE POOR 1500 μ 15-MIN!
 WORKING ON CONSOLE WITH TER,
 TRYING TO GET AT LEAST ONE LOOP OF
 SVC CONSOLE TIGHT ENOUGH FOR TEST

8-26-68 3RD SHIFT

106 ① 1201 BACK ON THE LINE SEQ 04 STEP 16

104 ② TER WORKED ON BLUE GOOSE AND FOUND
INTERNAL LEAK IN VALVE SV 35.106 ③ 4225 T.S. DR #9 SHIFTING OVER TO
SEQ 08 WHILE ITI CHECKS THE
MEASUREMENTS SR 5872 AND SR 5877.

8/26/68-HUBER

1. OCP 4225-SC106 COMPLETE EXCEPT FOR T/Sing DR 9.
2. S/C 104 FIC W-G. EFFORT IN THE "GATHERING GSE TO SERVICE" STAGE. LEAKS IN -176 HAVE BEEN FIXED. THIS EFFORT WILL PROBABLY BE SHUT DOWN ~~AT MIDNIGHT TONITE~~ ^{AT 7AM TOMORROW} & REMAIN DOWN UNTIL CREW-IN-SUITS COMPLETED (i.e., TOMORROW NITE). KEEP CHARGING ON THIS (i.e., GATHERING EQUIPMT. & OCP 1090 SECT. I & SECT II) UNTIL YOU GET SHUT DOWN. SERVICE IF YOU CAN. THIS WILL BE DONE PER OCP 1090 & TUAR'S. THERE IS A CURRENT 1090 TR.
3. OCP 1201-SC106 PROCEEDING SLOWLY. CURRENTLY TAKING HYDROCARBON SAMPLES FR. TREE PRIOR TO INSTALLING FIC 3.
4. OCP 4225 HAS #1 PRIORITY ON S/C 106; OCP 1201 HAS #2. THEREFORE YOU SHOULD HAVE ALL THE TECHS/QC YOU NEED. SCREAM IF YOU DONT. HAVE ENOUGH.
5. THERE IS A ENGRG/NASA FLAP OVER WHICH TYPE VOI-SHANS (AL, copper, etc) ARE ACCEPTABLE IN S/C 106. THEREFORE WHEN WE GET TO THE POINT OF INSTALLING XMAS TREE TO FIC'S 2 & 3 - STOP! & WAIT FORM A FIRM ENGRG. DECISION AS TO WHAT TO USE.

8/26/68 2ND SHIFT DICEY

1. SC106, 1201. FC 2, 3 INSTALL. IN WORK. E.O. IS TO USE NICKEL VOISHAN CONNECTOR SAFETY WIRING IN WORK, WAITING FOR ON-SPOT EO TO GO TO 175 IN HB ON 1/F B-NUT.
2. SC106, 4225. STILL T/S DR 9
3. SC104, 1090. VACUUM DECAY & VAC LEVEL IMPROVED FURTHER ON SETUP. CHARGING ON PREP FOR 1090 SVC

3RD SHIFT 8-27-68 BEMMAN

- 106 (1) EO. 702143 CANCELS COPPER 101 SHAWS. EO 702144 ESTABLISHES TORQUE OF 175" LBS.
- 106 (2) VENT 1201 LINE DAMAGED WHEN TORQUE WRENCH SLIPPED. MUST XRAY ETC.
- 106 (3) DR #9 HELD ~~WAIT~~ FOR AWHILE UNTIL WINDOW IN 5056 BECAUSE OF INSTRUMENTATION READ OUTS BEING USED.
- 104 (4) COULD NOT FIND CURRENT TRL ON 10090. THEY ARE MAKING UP ONE NOW. SPORADIC SUPPORT BECAUSE OF 5060

8/27/68-HUBERZ

1. THE PLOT FOR S/C 104 FOLLOWING OCP 5060 IS ENCLOSED ON PG. 272. THIS IS THE EFFORT PRIOR TO DEMATE; ALL IN PROP/FC WORLD. THESE TASKS HAVE TOP PRIORITY FOR TECHS/QC.
2. OCP 1201-SC106 CONTINUING. REWORK OF DAMAGED LINES HAS BEEN COMPLETED. EXCEPT FOR X-RAYING & MR PAPER ONLY. FC 3 CURRENTLY BEING INSTALLED. YOU SHOULD BE AWARE OF NI VOISHAN (ONLY) E.O. BE AWARE THAT WE HAVE HAD A SET OF SPECIAL WRENCHES BUILT TO BACKUP LINES WHERE TREE INTERFACES W. S/C LINES. SHOP HAS THESE TOOLS. MAKE SURE D/662 USES THEM WHEN TORQUING THESE LINES.
3. USE ALL 2ND & 3RD SHIFT PROP. TYPES ON S/C 104. S/C 106 CAN'T GO ANYWHERE SINCE 104 HAS -075.

8/27/68 2ND SHIFT DICEY

1. SC104 - DID NOT GET STARTED ON 4224 - ECS PURGE & S/C PWR DWN
- 1090 - STILL PRETEST VERIF SETUP SHORT VLV & RECLEAN SOME PARTS
2. SC106 - 1201 - FB PRR'D DR 51 4225 DR 9 FOUND OPEN P140 + P803

W. HUBER
8/27/68

SIC 104 RETEST EFFORT FOLLOWING OCP 5060

COMPLETION OF OCP 5060

~~4/1~~ ~~X~~ C V34 GEN RETEST TPS 029
VLV. SIGS.

~~4/1~~ ~~X~~ C V34 GEN RETEST TPS 003
RCS INJECTOR FLOW

C OCP 0131 DR 65
SPS PU SNR. FAIL

RUN ON 1ST SHIFT-8/28

C
PRESSURIZE

4/2 TPS XXX TO PRESSURIZE &
RUN SPS DRYNESS &
HYDROCARBON TESTS

PROPULSION

~~4/1~~ ~~4/1~~ C OCP 1090 RETEST
SERVICE FIC Z W-G LOOP,
COMPRESSIBILITY & SAMPLES

4/1 V37 GEN DR 97
LK. CHECK DAMAGED
FIC LINE

FIC - CRYO.

4/1 OCP 1518 DR 13
S48TK4PI CONNECTOR VERIF.
LN2 IN O2 TK.

RUN ON 1ST SHIFT-8/28

ONLY

8-28-68 THIRD SHIFT BEAMAN

- 104 ① TPS 29 GOT IN WORK AFTER TWO MOD SHEETS. 075 COULD HAVE BEEN SWITCHED OVER FOR 104 USE. RUNNING FAIRLY WELL
- 104 ② TPS 31 GOT IN WORK VERIFYING TEST SET UP NOW. 0630. HAD PROBLEM WITH LEAK IN VALVE BOX.
- 104 ③ 1090 FINISHING UP FILL SET UP. HAD TECHNICIAN PROBLEMS. LEAD MAN ASSIGNED NEWMAN'S TECH TO KEN AMES WHEN NEWMAN HAD HIS BACK TURNED. THE ENTIRE SHIFT WAS ONE BIG MERRY GO ROUND TRYING TO CLEAN UP ALL OF THE OPEN CRUD. JUST 700 HADY JOBS SCHEDULED.
- 106 ④ 1201 NEW LINE BEING PROOF TESTED. MR HAD 18,000 LB PROOF REQUIRED AND WAS CHANGED. DORNIS FOUND LEAK ON CRYO SHELF WHILE TROUBLE SHOOTING DR #7.

8/28/68-HUBER

1. S/C 104 MASTER PLAN STARTED TO PG 272 STILL IN EFFECT.
2. ~~DICEY~~ ^{DICEY}: TYLER TOLD ME ~~LAST~~ ^{LAST} ~~NITE~~ ^{NITE} HE IS GOING ON VACATION NEXT WK. 1ST SHIFT SECRETARIES HAVE NO RECORD OF VAC. ~~REQUEST.~~ ~~WAS THIS DONE IN 3RD?~~ ~~PLEASE~~ ~~DON'T SIGN ANY VACATION REQUESTS W/O NOTIFYING 1ST.~~
3. BEAMAN: RE SAVALA GOING TO 1ST SHIFT. HE IS NOT SCHEDULED TO DO SO 'TIL 1ST OCTOBER. YOUR NOTE SAID HE WANTED TO GO TO 1ST WHEN HE RETURNED FROM VACATION. YOU WILL NEED HIM TO REPLACE ~~AMES~~ ^{AMES} NEXT TUES. IF THERE IS ANY DOUBT ABOUT HIM COMING IN ON 3RD TUES, PLEASE CALL HIM.
4. S/C 104 STATUS (RE chart on pg. 272):
 - a. ULUSIGS (TPS 029) COMPLETE. RESULTS NOT BACK YET.
 - b. DR 65 (PU SNR LITE) COMPLETE. DESIGN CHANGE NEEDED.
 - c. TPS 31 (SPS DRYNESS & H.C.) HALF DONE. DON'T WORK TONITE. WORK 1ST SHIFT ONLY.
 - d. OCP 1090 CURRENTLY IN WORK. READY TO SERVICE.
 - e. TPS 3 (RCS INT. FLOW) IN WORK.

2ND-YAHN
3RD-NEWMAN

2ND-TYLER
3RD-BERG

5. S/C 106 EFFORT:

- 2ND-HASUMOTO
3RD-DORNIS → a. OCP 1201 READY TO GO BACK ON AIR & LK. CHECK FK 2 & 3 LINES.
- 2ND-FINLEY
3RD-AMES → b. OCP 4128 PRETEST. NOTE-075 NOT NOW AVAILABLE BUT NOT NEEDED TO SEQ. 08?

8/28/68 2ND SHIFT DICEY

1. SC104, 1090.
FC 2 SERVICED
COMPRESSION GOOD. 1.65 ML
PART. COUNT GOOD.
CHEM SAMPLE SUBMITTED.
2. SC104, 422 RCS INT FLOW
RUNNING ALL SHIFT
3. SC106, 1201
ON AIR ALL SHIFT
TER DR
4. SC106, 4128,
SECT I ABOUT COMPLETE (LESS 075)
FLEX LINE PROOF PRES ID. PROB.

3RD SHIFT 8-29-68 BEAMAN

- ① WHY DR 13 ON FIRST SHIFT ONLY. I WAS ASKED THIS QUESTION SEVERAL TIMES. COULD NOT FIND CONTINUATION SHEETS TO ESTABLISH HOOK UP.
- ② AT 0700 FOUND AT TURN OVER I UNDERSTOOD THAT DR #97 HAD BEEN SOLD BUT NOW I UNDERSTAND IT PROBABLY WASN'T PERFORMED SO THAT IS A REAL BAD SHOW. WE WERE FAKED OUT FROM HEW AND CRY FOR DR 13.

104 (3) INJECTOR FLOW TPS COMPLETED AT ABOUT 0645, MUCH HASSLE ON TEST KIT ~~&~~ PROOF PRESSURE AT FIRST OF SHIFT WE PROBABLY LOST ABOUT 3 HOURS TOTAL ON THAT ONE.

104 (4) W/G SAMPLE FOR CHEM ANALYSIS ON DESK AWAITING TRANSPORT TO PROPER LAB PEOPLE.

106 (5) 1201 FOUND SEVERAL LEAKS, THEY WERE DOWN TO FIX THEM. INSTRUMENTATION WENT IN TO REPAIR WIRE FOR DR 9.

106 (6) SPS ENGINE HAD "O" RINGS REPLACED BUT NEEDS LEAK CHECK, ALSO HEATER WIRE FIXED AND IN CURE.

8/29/68-HUBER

1. GOOD SHOW LAST NITE ON ALL SHIFTS & ALL TASKS. LOOKS LIKE YOU HAD THE TECHS & Q.C. NEEDED
2. WEEKEND O.T. SHEET ENCLOSED. PLEASE FILL OUT & RETURN. RICK: I PUT FINLEY DOWN FOR SECOND SHIFT SAT. AS DUTTON NOW ON VACATION & TYLER GOING ON VACATION NEXT WEEK. NO 104 O.T. ON WEEKEND; EXPECTED TO BE IN TEST CELL.
3. RICK: YOU WILL PROBABLY HAVE TO MASUMOTO (RATHER THAN YAHN) SAT. AS WALT WORKED ~~THE~~ LAST SUN. JACK: LIKEWISE, NEWMAN WORKED LAST SUN. - YOU'LL PROB. HAVE TO USE DORNIS SAT. NITE.

4. OCP 1201-SC106 CONTINUING IN SEQ. 06. STILL LEAK CHECKING F/C'S 2 & 3. HUNG UP ON 1ST SHIFT W. MASS SPEC. PROBLEMS & INSTR. OUTAGES.
5. OCP 4128-SC106 STILL IN PRE-TEST. MAY GET INTO THIS TONITE -075 STILL ON S/C 104 BUT NOT NEEDED FOR 4128 TIL SEQ. 8.
6. PER S/C 104 CHART ON PG. 272: DR 13 CURRENTLY IN WORK - WILL RUN OVER INTO 2ND. DR 13 TO BE FOLLOWED BY DR 97 (DR 97 NEEDS A Q.D. BEING USED BY DR 13). AFTER DR 97 SHUTDOWN VIA SEQ. 11, OCP 1090 (ASSUMING NO PROBLEMS).
7. ~~DR~~ 31 (S/C 104 SPS DRYNESS) BEING RUN. WILL CONTINUE PROB. TIL MIDNITE.
8. RUMOR GOING AROUND HAS IT THAT THERE IS A BATCH OF F/C'S WITH BAD CERAMIC SEALS (INTERNAL) & THAT THE F/C'S MUST NOT BE USED. S/C 104 F/C'S 2 & 3 ARE IN THE BATCH; S/C 106 IS CLEAN. HAPPY THOUGHT.
9. JACK: DORNIS IS TO STAY ON 3RD SHIFT NEXT WEEK. MAKE SURE HE REALIZES THIS. HE GOES ON VACATION 9/9/68.

8/29/68 2ND DICEY

1. SC104 TPS ~~TP~~ SPS DRYNESS COMPLETED
G₂ ~~SEVERAL~~ TP FAILED $\frac{1}{8}$ 90 PPM MAX
WERE 150 PPM APPROX
2. SC106 1201 SEQ 06 IN WORK - VALVE BOX LEAK
" 4128 - RESISTANCE CHK LINE HTR
WIRING HOLDING OPEN SECT I

3RD SHIFT 8-30-68

106 ① TRYING ALL NIGHT VERY HARD TO GET INTO SEC II OF OCP 4128. MANY CONSTRAINTS AND PORTIONS OF SEC I TO PERFORM. IQ. 10030 WASN'T CLEARED UNTIL APPROX 0330. 075 WAS MADE AVAILABLE BECAUSE SEQ 1 DEPRESS URINES TANKS.

104 ② DR #97 COMPLETE WHEN WE CAME IN RAN DATA POINTS ON FLOW, THEN PERFORMED SEQ 11 1090. RACO SEALS NONE

106 ③ 1201 MANY LEAKS IN VALVE BOX ESTIMATE COMPLETION BY TER AROUND NOON TODAY.

8/30/68-HUBER

- 1. S/C 104 READY FOR DEMATE IN FIC -PROP. AREAS.
- 2. OCP 1201-SC106 BACK IN SEQ. 06. HUNG UP 2ND & 3RD SHIFTS & MOST OF 1ST W. VLV. BOX PROBLEMS.
- 3. OCP 4128-SC106 RUNNING IN SEQ. 02.

8/30/68 2ND DICEY

- 1. SC104 . DEMATE 2400 HRS .
- 2. SC106. 1201 RUNNING. FC 1 UP TO SECTOR .
- 4. SC106 . 4128 - RUNNING WELL ALL SHIFT NOW UP TO SEQ 05 - 0291 .

8/31/68-HUBER

- 1. OCP 1201-SC106. FIC 1 WILL HAVE TO BE PULLED BACK OUT. SEEMS THE MOUNTING BOLTS D/662 USED ON FIC'S 2 & 3 WERE TOO SHORT.
- 2. OCP 4128-SC106. RUNNING IN SEQ. 05. GOING SLOWLY WITH PU VLV. ⁴⁰PROCEDURE PROBLEMS. AFTER SEQ. 05 RUN SEQ. 06; SEQ. 07 WILL PROBABLY BE DELAYED DUE TO D/662 NOT HAVING SPS HTR INSTL. COMPLETE. IF YOU GET HUNG UP IN 4128 CONSIDER SHIFTING TO OCP 4225 AS WE HAVE ABOUT 13 STEPS THAT STILL NEED TO BE RUN.

- 3. SHIFT ASSIGNMENTS FOR NEXT WK:

PROP	{	2ND	{	FINLEY	FCC	{	2ND	{	MASUMOTO
				DUTTON					YAHU
		3RD		BERG			3RD		DORNIS
				SAVALA					NEWMAN

8/31/68 2ND DICEY

1. SC106
1201. HOLD - (2) LINES TO BE DYE-PENNEO
4128. RUNNING WELL ALL SHIFT -

9-3-68 3RD SHIFT BEAMAN

106 (1) DELAY IN POWER UP BECAUSE OF QUESTION OF WHETHER MR ON SEVERAL CONNECTORS HAD BEEN WORKED. F/C NR 1 ON HOIST AND SEVERAL DR'S BEING WORKED IN AREA.

106 (2) 4128 BACK IN TEST. SEQ 08 SKIPPED

106 (3) 1201 PROBLEM GETTING CONFIGURED BECAUSE OF TANK FARM AND VALVE BOX.

9/3/68-HUBER

1. JACK: WE BLEW IT ON DORNIS; HE WAS ON 1ST TODAY. I HAVE LEFT HIM ON 1ST. YOU HAVE NEWMAN ONLY ON 3RD. THIS WEEK; MURPHY WILL GO TO 3RD NEXT WEEK. I DID TELL DORNIS, HOWEVER, THAT HE WAS DASKALLY ON STANDBY FOR 3RD THIS WEEK (I.E., IF NEWMAN SICK, ETC. HE WILL BE CALLED IN ON 3RD.

2. OCP 4128^{SC106} COMPLETED. OCP 4225-SC106 SEQ. 07 RETEST IN WORK; WILL PROB. BE COMPLETED BY END OF 1ST SHIFT.

3. UPON COMPLETION OF 4225-SC106 THE C14-075 IS TO BE RELEASED TO TER TO PERFORM BLOWDOWNS, HYDROCARBON CHECKS, ETC.
4. WE HAVE AN ATR TO RUN A SPECIAL RCS HTR. SW. EMI TEST ON S/C 106 AFTER-0126 PUR. UP. SHIMIZU HAS WRITTEN TPS (NOT RELEASED YET) & GIVEN GSE RIGHTS TO TER.
5. F/C 1 (S/C 106) CURRENTLY BEING INSTALLED. OCP 1201 IN HOLD AWAITING COMPLETION OF INSTL.

9/3/68 2nd D. Rhodewalt

(1) F/C S/C 106 Discovered F/C #2 bracket which supports plumbing had not been installed - this after all cells in place - including #1. At 1730 hrs /manufact. ~~it~~ was going to try to install bracket without removing #1 cell - Did not work. Medina notified @ 2215 HRS & decision made to pull cell at that time

retest

(2) 4225, completed about 1730 hrs. TER notified @ 1800 hrs that C14-075 was ready for blowdowns. ~~Blowdowns in work @ 1900 hrs.~~
2200 HRS TER still trying to put blowdown in work - we apparently ~~we~~ caught them off guard by finishing so soon. One DR sold on 4225. Others require Harveys signature.

3RD SHIFT 9-4-68 BEAMAN

106 (1) TER FLUNKED THE GAS BLOWDOWN OF THE 075. LOST TWO OUT OF THREE SO THEY PROCEEDED TO B. ABOUT 8 SAMPLES TAKEN NO RESULTS YET.

FWIKAWA CONCURS.
NOTE (SOME TEFLON WAS USED TO SWUB UP ONE BLOCK)

106 (2) 1201 LINE BLOCKS PUT IN WITH MUCH PUSHING AND HAULING. DON FELT AND I AGREE THAT A LEAK CHECK OF F/C 2 INTERFACE ~~AND~~ B NUTS SHOULD BE DONE. BECAUSE OF THE LINE MOCK UP.

106 (3) IN OCP-0126 AT 0635 MANNY IS ON STATION. J. BERG CALLED IN THAT HE WOULD BE ABSENT.

107 (4) RUNNING IN 1115.

9/4/68 - HUBER

1. F/C 1 CURRENTLY GOING BACK IN (3RD TIME).
2. ATR (ITEM 4 YESTERDAY) IN WORK. HAVE THE PROP. TYPES WORKING IT CHARGE THEIR TIME TO:

<u>LEDGER</u>	<u>G.O.</u>	<u>Sub. Acct</u>
3501	7140	2425.

ATR NOW INCLUDES RUNNING OF CM VLV. SIGS.

9/4/68 2nd D. Rhoads

(1) S/C 106 valve signature - found out approx 1 hour after turnover that valve signature test will be run in addition to ATR - TER requested list of equip req'd. Forwarded enclosed speed letter.

(2) S/C 106. F/C #1 just about completed (installation only) at 2300 hrs. Getting ready for final buy off & return to 1201

(3) S/C 106 configured for & testing valve signatures - made one run but tech had disconnected wrong connector. Re-running @ 2345 HRS. Steadman from RCS here to verify data. Very good TER help.

3RD SHIFT 9-5-68 BERMAN

106 (1) 1201 FC #1 IN PLACE AT START OF SHIFT NAGA INSPECTION FINISHED ABOUT 0130. SEVERAL MINOR DR'S TO BUY OFF. RAN 1201 LEAK CHECKS THROUGH MUNCH PERIOD.

106 (2) 1090 BLUE GOOSE STILL ON FLOOR BEING DRYED OUT. UNDERSTAND FROM TER THAT W/O WILL BE AVAILABLE ~~FOR~~ SOME TIME ~~FORWARD~~ (9-5-68.) DURING DAY SHIFT.

106 (3) COMPLETED TPS 004 ABOUT 0300.

106 (4) GET OK FROM ECB TO CHECK H₂O LINE CM/SUN INTERFACE.

106 (5) 1201 - LEAKS AT F1 AND F2 FC 1. FIXED ONE ~~ABOUT~~ NOT THE OTHER. WILL TRY ALUMINIUM JOI SHAN AT LOWER TORQUE AND GET AN E.O. LATER

9/5/68-HUBER

1. ALUM. VOI-SHANS INSTALLED ON FIC 1 F1 & F2 SOLVED LEAK PROBLEMS. JACK-THAT WAS AN EXCELLENT DECISION. WE'VE GOT ENGRG. BY YING-YANG. THEY DON'T LIKE AL BY DON'T SEEM TO HAVE THE GUTS TO TELL US TO R&R LINES. THEY WILL PROP. COVER AL VIA MR OR E.O. DON'T PULL THE AL OUT.
2. WEEKEND O.T. ENCLOSED. PLEASE FILL IN NAMES & RETURN.
3. LATEST WORD INDICATES FIC'S IN 104 ARE O.K. & WILL PROBABLY NOT HAVE TO BE PULLED.
4. S/C 106 ATR STILL IN WORK HEADED UP BY SCS TYPES & ENGRG. CH RCS HTR. SW. SEEMS TO GLITCH EVERYTHING. APPEARS YOU COULD FLY S/C WITH THIS SW. ALONE
5. S/C 106 VLU. SIG. DATA HAS BEEN REDUCED & 3 ENGS. FAILED. (WHAT ELSE). PLAN IS TO CHANGE THE BAD ENGINES LIKE RIGHT NOW ^{(I.E. AFTER ATR COMPLETE BUT DURING 0126).} IF THE ENGS. DON'T MEET PROC. SPEC. LIMITS WE WILL DISPOSITION TO R&R RATHER THAN WAITING FOR ENGRG. WORD TO R&R.
6. SINCE ENGS. ARE NOW CONNECTED FOR ATR WE SHOULD KEEP A PROP. TYPE IN ACE RM. AT ALL TIMES TO PROTECT ENGS.

9/5/68 J. Rhodewalt 2nd

(1) Bill - please check Jon & Fournine for R. Dutton's time card - it never showed up.

(2) F/C 106

Completed Sec 07 & ~~was~~ was patching for a TVAR in Sec 07 to purge GHE out of system (~~2300~~ 2300 HRS). Will then proceed into Sec 08 looks real good now!

(3) 0126 S/C 106 (ATR)

Talked with Prop types. according to them the ATR was completed at that time (2300 HRS) and patching was in work to go back into 0126. Some ~~problems~~ problems with RCS control ~~box~~ box - thought it might have to be pulled but came up with a w/a (breakout box) will probably pull box during ~~the~~ ATR mod. In regard to bad engines - prop types did not know which engines were bad - turnover from lot as to what to do about engines was nil!

3RD SHIFT 9-6-68 BEAMAR
106 (1) PATCHING, CABLE TO RCS CONTROL BOX
PROBLEM FINDING CABLE AND HOW TO SAFE
CABLE FOR RECESSED PIN. ~~ASO~~

106 ② 1201 PICKED UP A DR ON INSTRUMENTATION AND TROUBLE SHOOT 1106

107 ③ SHOP ASKED ABOUT PRESSURE ON SPL TANKS. TANKS HAD 4.8 PSIG IN THEM. HOWEVER, GAGE IS FOR ~~2~~ MUCH HIGHER RANGES.

106 ④ 1201 COMPLETED.

9/6/68-HUBER

1. WORLD TURNED OVER ON S/C106. WENT FROM 6 DAY EFFORT TO 7 DAY FLAT OUT.

2. NEW WKEND. O.T. SHEET FOR S/C 106 ENCLOSED. I GOT AS MANY VOLUNTEERS AS POSS.

NOTE:

1. 2 PROP. TYPES REQ'D. PER SHIFT;
1 FOR O126 & 1 FOR CM RCS ENG. R&R.

2. JACK: YOU WILL HAVE TO SHUT DOWN ENG. R&R ON 3RD TONITE. BERG TYPED UP; I CALLED HIM & HE WILL WORK SUN. 3RD.

3. JACK: YOU'LL HAVE TO NOTIFY SAVALA ^{& NEWMAN} TO BE IN SUN. ALSO.

4. DON: YOU'LL HAVE TO NOTIFY FINLEY FOR SUN; MURPHY HAS BEEN NOTIFIED ABOUT SUN. NITE.

3. S/C 106 FIC WORLD:

OCP 1201 COMPLETE. OCP 1090 IN SECT. I. TRY TO GET INTO 1090 TONITE & CHARGE (INCLUDING SERVICING). IGNORE ALUM. VOI-SHANS IN FIC 1 FITTINGS-ENGRG. WILL PROVIDE PAPER TO COVER AL WHEN THEY FIGURE WHAT TYPE PAPER TO USE.

4. DR4 OCP 4128-SC106 (I.E., DRIFTING PU. VALUE). ENGRG. IS TRYING PLANNING TO RUN AN RED EFFORT ON DR CONTINUATION SHEETS. PER MEDINA THIS WILL NOT BE DONE; WE WILL ONLY T/S IF WE GET AN ATR.

9/6/68 2nd D. Rhodewalt

Bill

(1) Regarding weekend O/T. Finley request Sat. work instead of Sunday. O/T list changed accordingly → Tom Sat, Roy Sunday.

(2) Removal of RCS engines (4) started in work early (1830) this shift & has been in work all shift. Purge applied & monitored by Prop types. Status 2100 hrs - all 4 engines ready to pull (bolts pulled then remove engines)

(3) S/C 106 PU valve (4128 DR 4). Got word from Medina that an ATR will not be req'd since proj manager requested test. PU valve test being written up by engr. on DR continuation sheets. O126 is now ~~expected~~ expected to finish on 3rd @ about 0400 hrs - may have to call A. O'Connell in early for support on this test. C14-GSI moved from BME area to stack @ 2100 hrs to support test.

Jack →

2nd cont'd

this item will have to be cleaned up prior to power off for ΔF mod.

(4) 1090 S/C 106 pushed hard this shift - Many many loose items (valves, hoses, etc) that had to be assembled on sticks to complete assembly.

Bill → Why can't TER assemble TK kits for this test. This cost a lot of time this shift & you always have a continuation threat over your head doing things this way.

One vacuum hose from servicing unit to S/C was found to be bad @ 2130 hrs. TER looking for replacement.

2300 HRS → Hose replaced. Trying to get good vacuum decay on system S/B scope in 15 minutes - got 1000μ probably some moisture.

Yahn says most of pretest done - didn't check personally.

3RD SHIFT - 9-6-68 J BEAMAN

106 (1) RCS ENGINES BEING REMOVED. ^{HAD} HAVE A FLIP ON DR. PROCEDURES RELATED TO CLEANLINESS AND WHAT STEPS HAVE TO BE PUT ON DR.

106 (2) 1090 STILL TRYING TO GET BLUE GOOSE TIGHTENED UP.

(3)

2nd DM Rhodewalt 9/7/68

(1) 1730 HRS F/C 106 @ say 06-008 going thru vacuum pull down. The plot now on 106 is to power down if fuel cell effort goes down. If it goes well radiators will be filled & compress. checks run prior to power down.

1900 HRS - vacuum leak in F/C #2 line - can't hold decay.

2130 HRS GSE good up to QD interface - may be prob in QD or male fitting on GSE side of QD

Plot is to continue T/S without vehicle power

(2) P/U valve - M&T's (Casper) went home @ 1730 HRS. T/S had indicated at that time that valve was good but S/C cabling screwed up somewhere.

Bill (3) Need new log book

(2000 hrs)

(4) Engr. contacted, with the idea that vehicle power would be left on if needed to further resolve problem. Engr. said all further T/S can be done without power

S/C 106 (5) Vehicle powering down at 2230 HRS. 0126 completed. 1090 continuing to T/S to get good vacuum - vehicle power not needed.

Bill I contacted Roy Dutton & shut him off for 2nd Sunday. Tried to reach Murphy but couldn't - will call him tomorrow. Didn't contact Bob M. because of engine work, will leave this up to you.

3RD SHIFT 9-8-68

106 (1) RCS ENGINE REINSTALLATION IN WORK.
ONE ENGINE ALREADY INSTALLED ANOTHER
ENGINE ON THE STACK AT APPROX
0330. V. BERG SUPPORTING TO PROVIDE
PURGE AS REQUIRED. JUST HOW PURGE
WAS ESTABLISHED IS VERY UNCERTAIN
WHEN LOOKING AT THE DR.

106 (2) 1090 HUNTING FOR LEAKS. DECAY
IS NOT SATISFACTORY ON LOOP #2
AT 0500. 0630 FOUND ANOTHER LEAK
NEXT TO FILTER.

106 (3) ENGINE INSTALLATION HELD UP FOR
NEW DRAWING.

9/8/68-HUBER

1. DUTTON & MURPHY HAVE BEEN TURNED
OFF; WILL NOT BE IN TONITE.
2. McCLINTOCK WILL BE IN TO FOLLOW
RCS ENG. INSTL. IN S/C 106.
3. NO FIC TYPES ON 2ND. WE HAVE
12 DAYS TO SOLVE LOOP 2 LIK. PROB.

9-9-68 THIRD SHIFT BERMAN

106 (1) RCS ENGINE INSTALLATION IN PROGRESS.
WE HAVE A HELL OF A TIME TRYING
TO FIGURE OUT WHAT THE STATUS OF
THIS EFFORT IS. THE BIGGEST PROBLEM
IS THE LIMITED INFO ON THE DR
CONCERNING WHAT LINES ARE HOOKED
WHERE AND WHY PURGES ARE PUT ON
AND TAKEN OFF. SYSTEM LOG DOESN'T
HAVE ANY INFO EITHER. SYSTEM 2 ROLL BEING
HOOKED UP ELECTRICALLY. PURGE APPLIED.

106 (2) 1090 - PULLED THE SYSTEM DOWN AGAIN
TO SEE WHAT KIND OF A DECAY WE HAVE.
MASS SPEC HAS BEEN DISCONNECTED FOR USE
ON S/C 107. RESULTS OF DECAY ON
LOOP 2 AFTER 30 MINUTES 28 M.M. LOOPS
1 & 3 OK.

107 (3) PRETEST 1518 IN WORK, ^{ON STACK} PRIORITY 6 OR
CATCH AS CATCH CAN. 11/5 RUNNING, TROUBLE
SHOOTING 5069 DR#3 900 PSI O₂ SYSTEM AND
TRYING TO GET 5049 IN TO SEQ 01.

106 (4) - YAW DUMMY ENGINE BEING REMOVED.
RCS CONTROL BOX PIN HAS BEEN FIXED.
PICTURES ARE NOW BEING TAKEN 0645 AND
STEP ON DR 69 WRITTEN TO REINSTALL IT.

9/9/68-HUBER

1. NOTE: BECAUSE OF THE POSSIBILITY
OF ZAPPING A FIC BY POLLING
A VACUUM ^{ON W/4 LOOPS} W/O PWR. ON. WE MUST
CEASE SUCH OPERATIONS UNLESS
WE HAVE KNOWN N₂ PRES. IN
THE FIC'S (i.e., PWR. ON).
2. LATEST RUMOR SEZ FIC'S 1 & 3
IN S/C 104 ARE BAD & NEED
BE RER'D.
3. ^{SPS} ENGR. HAS SUPPLIED A PLOT TO
CONTINUE T/S'ing ON DR 4 OCP4128-SC106.
MIGHT BE ABLE TO GET THIS ON
AIR TONITE.
4. OCP 1518-SC107 SECT. I PRIORITY. GORDON
STEWART SEZ WE'LL GET INTO
SECT. II ON 3RD SHIFT.

9/9/68 2nd J. Rhoades

Bill → (1) Regarding interviews for Florida - contacted all types (you area) on 2nd and the following would like an interview.

T. Finley
R. Dutton
E. Murphy

(2) Re ● TK cable modification to support DR #4 4128. Tried to help TER people in regard to information needed for cable modification. Lack of inform from first (planned usage, design req't. etc) made this extremely difficult - please get notes in log

(3) S/C 106 RCS engine replacement - per notes from days the glitch test on these engines had not been performed. RCS eng (Stetson) did not want to make decision on stopping installation work. TPE elected to continue installation. Engines ~~was~~ installation just about completed @ 2400 hrs

(4) 1518/S/C 107 - picked up tech @ 1800 hrs. He worked all shift gathering equip. Much, much work to do.

3 TK's ~~was~~ changed out to OCR-P-9028. TER (Bange) notified about this.

9-10-68 3RD SHIFT BEAMAN

① THE FOLLOWING PEOPLE HAVE INDICATED THAT THEY ARE INTERESTED IN BEING INTERVIEWED BY THE K.S.C. REPRESENTATIVE.

P. MASUMOTO

② NEWMAN & SAVALA NOT IN. NO FLORIDA INTERVIEW.

③ BERG WORKING ON RETEST PQMTS

9-10-68 FIRST W.D. Manha
① Curt Allen, X-1934 requested time of ACE course completion for W.O. FARR - 4-7-67
T. Finley - ?

9/10/68 2nd J. Rhoades

(1) T. Finley completed ACE course in January 1965. ~~He has~~ He has ACE open card which is all signed off but is not dated.

(2) 1518 - still in work on sect I. Low priority but some work done.

Prop (3) List turned over to TER for further equip req'd to suppt DR 70, 71, 2, 3 on ~~the~~ RCS engines.

Bill (4) Are you going to pick up Jimmy Wu? He's anxious to have answer.

NO.
WE ARE FROZEN!

9-11-68 BEAMAN THIRD SHIFT

102 (1) 1518 Hooking up per SEC I.

106 (2) J. BERG working on RE TEST TPS.

9/11/68-HUBER

1. CURRENT PROPULSION STATUS:

a. DUTTON & BERG WRITING PROP. PANEL RETEST FOR S/C 106. TPS MUST INCLUDE INTERIM STATEMENTS THAT "STEPS XX, XX & XX VERIFY CONNECTOR XX, PINS XX, XX & XX." ALSO, A SPEED LETTER MUST BE SENT TO TER IDENTIFYING GSE NEEDS FOR PNL. RETEST.

b. DR 4 OCP 4128-SC106 (PU ULW. PROBLEM) T/S'ing CONTUNING. O'CONNELL WORKING ON DAYS. ~~XXXXXXXXXXXXXXXXXXXX~~ EFFORT SHOULD BE CONTINUED ON ALL SHIFTS. CURRENT PLOT CONSISTS OF:

1. C/O PUGS DISPLAY UNIT ON PNL. 3 USING -163 BME UNIT. WORK SHOULD BE DONE ON STACK BY TAKING PNL. 3 TO BME UNIT (ON STACK).

DISPLAY UNIT CAN BE T/S WHILE INSTALLED IN PNL.

2. C/O WIRING BETW. DISPLAY UNIT (PNL 3) & PUGS CONTROL UNIT (BLACK BOX ON SM TOP DECK).

3. C/O PUGS CONTROL UNIT USING -163.

ALL OF THIS CAN BE DONE DURING AF MOD. (i.e., w/o S/C PWR). IT IS CONSIDERED T/S'ing & WILL BE DONE W/O ATR (MEDINA CONCURS). ENGRG. WILL SUPPLY GEN'L. OUTLINE; WE WILL SUPPLY DETAILS ON DR & RUN TESTS.

C. SINCE THE 4 CM RCS ENGS. RECENTLY REPLACED ON S/C 106 HAVE NOT HAD THE ~~THE~~ LATEST SUPER-DOOPER BME C/O, PLOT IS TO C/O THESE 4 ENGS. ON STACK USING BME UNIT (i.e., 11FC-0034). AGAIN, ENGRG. WILL SUPPLY GEN'L. TEST OUTLINE & WE WILL SUPPLY DETAILS ON DR & RUN TEST. AMES IS WORKING THIS ON DAYS.

2. ALL THE F/C-PROP. TYPES ON 2ND & 3RD ARE CURRENTLY QUALIFIED OR WILL BE AS SOON AS PAPER IS PROCESSED WITH THE FOLLOWING EXCEPTIONS:

a. BERG - NEEDS TO SHOW PROOF THAT HE ATTENDED TEST TEAM SAFETY COURSE (731 KP)

- OR -

SEND HIM.

b. NEWMAN - NEEDS TO SHOW PROOF THAT HE ATTENDED & PASSED ACF COURSE

- OR -

SEND HIM.

BEAMAN.

TEUTATIVE
PLAT CLOSED
LEAVE IN BOOK

3. RUMOR STILL HAS IT THAT WE WILL HAVE TO R&R F/C'S 1 & 3 IN S/C 104 HERE IN DOWNEY. MIGHT START AS SOON AS TOMORROW NITE IF S/M RETURNS ON SCHED. FR. 8/260.

IF THIS HAPPENS I SHOULD KNOW TOMORROW & WILL LEAVE A COMPLETE PLOT TOMORROW NITE.

4. OCP 1518-SC107 STILL IN SECT. I. GOING SLOW DUE TO LOW PRIORITY. SECT. I APPEARS TO BE ABOUT 50% COMPLETE.

9/11/68 2nd D. Rhodewalt

(1) Tom F. backed out of Florida deal - no longer interested - Murph + Dutton still on.

(2) 1518 Section I still in work - discovered major probs on SCAT 049. The 049 + the connecting cables have all been reidentified. John + Murphy writing TVAR's (have new drawings for new numbers) to correct OCP & allow stock to ~~put~~ complete 049 hookup.

(3) PU valve effort - Work from engineering (Casper) put on DR. Good DVM obtained, and best setup made. Ready to run test but no QC available (2345 hrs).

(4) Finley rewrite select TPS.

9-12-68 THIRD SHIFT BERMAN

107 ① 1518 STILL WRITING TVAR'S.

TVAR'S FOR SECTION I ON FLOOR EARLY IN SHIFT MAS FOLLOWING HOOK UP.
NEWMAN WRITING ADDITIONAL TVAR'S

107 ② ~~R-613 IS DISCONNECTED IN DR 3~~
~~#~~

106 ② J. BERG RUNNING TPS FOR RCS ENGINES. HAVING PROBLEM WITH BREAKOUT BOY AND CABLE. THE CABLE IS PROBABLY THE WRONG ONE. UNABLE TO FIND DRAWING FOR BOX OR CABLE.

106 ③ M. SAVALLA WORKING DR# 4 FOUND SOME BENT PINS ON S/M P120.
~~#~~ REPAIR IN WORKS.

9/13/68-HUBER

1. NO DECISION YET ON S/C 104 P/C R&R.
2. CHARGE ON OCP 1518-SC 107.
3. S/C 106 VLV. SIG. C/O OF 4 NEW ENGS. COMPLETE, 2 ARE BAD & NEED TO BE R&R'D.
4. PU VLV. T/S'ing. INDICATED PROBLEM WITH VLV. ITSELF. CURRENT PLOT TO O/D REPLACEMENT VLV. ON STK. BEFORE INSTL. & WHILE PRESENT VLV. STILL INSTALLED.

9/12/68 D. Rhodewalt 2nd

Bill Action

(1) Overtime -
Scheduled 2 prop for both days over weekend
Roy requested a sub from 1st if possible for Sunday.

Bill, please remember that Sunday O/T is for next week & we could be over limit if work is req'd for next Saturday

(2) PU Valve S/C 106

R. Dutton picked up inputs from Casper + Gallenors @ 1800 hrs. Got valve & went into test. Results were same as valve installed in vehicle - what do we do next?

(3) ~~#~~

RCS S/C 106

Work on this shift to replace TY & pitch RCS engine - DR's written to remove & replace & purge applied.

(4) 1518

Open items @ start of shift

- 4.1 needle valve
- 4.2 vac ion pumps
- 8.1, 2, 3, 4, 5, 6, 7.
- 8.8
- 8.10

Worked hard on this shift - completed all of above sequence & into OCP @ 2400 hrs. Had to coerce, threaten etc techs + inspection to do it.

Bill -> In this area 8.1 thru 8.7 could have been sold by CTC any time during the day (these are 1237 items), 10030, 10058 were completed last night yet still open @ start of shift. - lets push the CTC's on these items & lets stop this rewriting effort on TVARS..

ROGER

3RD SHIFT 9-13-68 BEAMAN

107 (1) 1518 GOING PRETTY WELL IN SEQ OHT. ~~HAD~~ THEY HAVE A PROBLEM WITH PRESS X-DACERS APPARENTLY CURVES WERE NOT PROGRAMED. THIS IS PRETTY SAD. ALSO, I HAVE SOME TORQUED STC'S BECAUSE OF THE EFFORT THEY PUT IN TO WRITING TVAR'S AND THEN HAVE THE WHOLE DAM THING TURNED AROUND ON THEM.

YOU'RE RIGHT. WELL KUDOS IT OFF.

106 (2) ^{RCS.} BERG CHECKED ON NEW ENGINES. UNDERSTAND ONE ENGINE COMING FROM 108 WHICH HAS HAD THE BOME CHECK. THE OTHER ENGINE IS COMING FROM 110 AND IS GOING TO ME FOR SIGNATURE CHECK. ON THIS SHIFT WE HAVE NO IDEA HOW, OR WHAT OR WHY ENGINES ARE SELECTED. PEOPLE FROM ENGINEERING

AND THE SHOP DON'T SEEM TO KNOW EITHER.

106 (3) SAVALA ONLY IS SCHEDULED TONIGHT BECAUSE P.U. VALVE PROBLEM IS IN A HOLD. MASHUOTO SATURDAY FOR 104 EFFORT AND NEWMAN SUNDAY. NEWMAN SAID HE WOULD BE ON STANDBY IF YOU NEED HIM.

104 (4) ESTIMATED TONIGHT SOME TIME. I HOPE PAPER WORK AND EQUIPMENT INFORMATION IS BEING GENERATED ON DAY SHIFT BECAUSE WE HAVEN'T ANY WFO ON THIRD SHIFT.

I WILL NOT BE IN THIS WEEKEND FOR A CHANGE. I FIGURE THE PEOPLE COMING IN CAN HANDLE EVERYTHING OK.

GO TO LOG 2