



BYE-109553-70  
Copy 10 of 14  
24 December 1970

MEMORANDUM FOR: Director of Special Projects

SUBJECT : Photo Reconnaissance Systems Report No. 72

I. CORONA

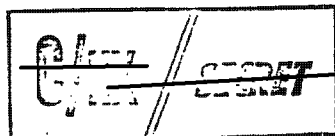
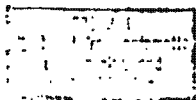
A. Accomplishments

CR-14 and CR-15 storage audits were completed.

B. Problems

1. A bent switch cluster actuator was discovered on CR-8 during instrument acceptance; further investigation indicated potential damage to other actuators in all systems. Bent actuators allow for over-travel of .0002" to .0003" in extreme cases. All systems are being inspected, and bent actuators replaced. In addition, a product improvement "FEWO" is being incorporated, adding redundancy to the switch function, on all remaining systems.

2. CR-16 had a bad cut-and-wrap during pre-storage functional. The system was reconfigured for tracking test to properly realign the system. During hand cycling operation, the payload had a loss of back torque which was subsequently attributed to the A-1 servo amplifier on the No. 1 side. The amplifier was replaced, and the camera acceptance was successfully completed. The system was then reloaded for tracking.



HANDLE VIA BYEMAN  
CONTROL SYSTEM ONLY



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C. Projected Schedule

1. CR-13. Flight preps.
2. CR-14. Storage, R-25 status.
3. CR-15. Pre-storage.
4. CR-16. Tracking.
5. CR-8. Instrument acceptance.

II. HEXAGON

A. General

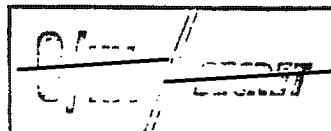
1. The configuration check of the Uncaged Supply test specimen has been completed with successful results. PE is proceeding with the uncaged concept for P-7. A design margin vibration test will be conducted in mid-January.

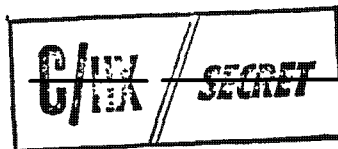
2. The system thermal difficulties encountered in the Chamber A-1 test of SDV-III requires that the thermal aspects of the Chamber A-1 test of SV-1 be modified. A Structural/Mechanical/Thermal IFWG will be held on the west coast the week of 4 January to develop a joint recommendation for test mods.

3. The second orbital rehearsal was held starting 15 December and ending with Rev. 52 on 18 December. No major problems were identified in the rehearsal. The SPO directed that the third rehearsal, scheduled for 5-8 January, be lengthened by two days and conclude on 10 January. The rehearsal will be close to the 'nominal profile' for first five days of first flight. As a result of a meeting between SSPO and SPO representatives at the WCPO on 23 December the following broad guidelines for the first mission were agreed upon:

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- a. No negative operational adjusts.
- b. Have perigee near injection point (about 20 degrees N).
- c. 95 NM is min. altitude for mission. No altitude above 145 NM in sunlight area.
- d. Min. rewind for first three RV's.
- e. Minus 20 to plus 10 degrees beta angle. Launch at beginning of window.
- f. Plan mission to fill four RV's in 30 days; however, plan the ephemeris for 45 days which would allow latitude to fill three RV's in 21-22 days and fill RV-4 by Day 45.
- g. Plan for scan angles of plus or minus 30 degrees in general but accommodating the 45 degree scan angle requirements developed by [redacted] of Headquarters and forwarded to the STC.

4. As a result of the rehearsal-2 activities, several changes will be made to the HEXAGON Exposure and Ephemeris (HEEP) software. Checkout and final testing should be completed in time for rehearsal No. 3 on 5 January. LMSC personnel have provided the necessary ephemeris data to OSP for support of rehearsal No. 3, and work is continuing on this ephemeris software.

**B. Model Status**

**1. Development Model (SDV-III)**

- a. The loading of the new film stacks into the supply and the subsequent supply checkout were



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completed during the evening of 23 December. The supply will be available to SVIC for installation into the vehicle after the holidays (0700 27 December).

b. The material put into RV's 2, 3, and 4 in the chambers has now all been removed. RV-1 (takeup DM-4) is scheduled for shipment to EK on 28 December.

2. SV-1 (SN-003)

The vertical baseline test was completed on 20 December with no anomalous behavior noted. The SCC (Sequencer) box was removed on 21 December during a LMSC-caused window to permit repair of the damaged connector pin. The box was reinstalled on 22 December and will be functionally tested during the horizontal baseline test, which is expected to begin on 28 December.

3. SV-2 (SN-002)

a. Forward Section

No A&T activity was conducted during this period. Considerable effort, however, has been expended on the revision and updating of SV-2-related test procedures.

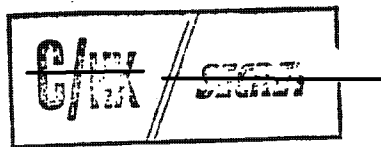
b. Midsection

Optical Bar "A" has been replaced. Platen "A" was vibrated during the OB replacement and has been reinstalled. The redesigned supply (FEV) was installed. All of the rework was accomplished

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without removing the Two Camera Assembly from the midsection. System testing is now underway. The supply steerer oscillation, previously present on Camera "B," appears to be gone.

4. SV-3 (SN-004)

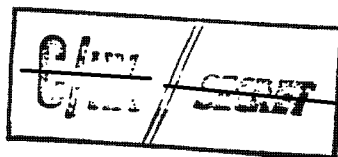
The Two Camera Assembly and the supply have been installed in the midsection assembly and moved to Ready Room "A." Manufacturing and QC verification is scheduled to begin 28 December.

III. Meetings Requiring Participation of Headquarters Personnel

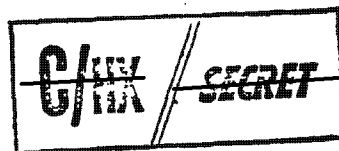
<u>Date</u>	<u>Subject</u>	<u>Attendees</u>
<u>EK</u>		
29 Dec	Work out Practice PFA Details	<input type="text"/>
<u>RCA</u>		
28 Dec	Buy Off P3-3	<input type="text"/>
<u>HQ</u>		
28-29 Dec	DH-7776 CCR Negotiations	<input type="text"/>

DONALD W. PATTERSON  
D/PRS/OSP

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