

16-21

SECRET
(When Filled In)

FILE INFO

13 Dec 71

REPRODUCTION PROHIBITED

ACTION	1	6	11	16
	2	7	12	17
	3	8	13	18
	4	9	14	19
	5	10	15	20

MMNS E C R E T 132155Z DEC 71 CITE []

25X1

PRIORITY [] INFO PRIORITY []

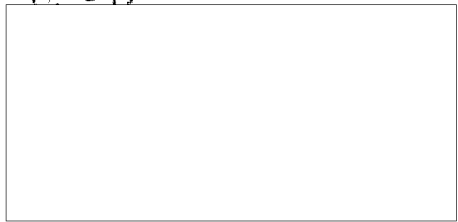
25X1

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IDEALIST/W (OM-1)

25X1

REF: A.



25X1

B.

C.

SUBJ: []

1. FOLLOWING OBSERVATIONS WERE MADE AFTER REVIEW OF SUBJECT

MATERIAL:

A. NO FRAMES WERE TRANSPORTED OR EXPOSED DURING THE MISSION.

B. APPROXIMATELY 12 OF THE 27 PREFLIGHT EXPOSURES WERE THE RESULT OF DOUBLE PULSES FROM THE SPECIAL INTERVALOMETER. DOUBLE EXPOSURES WERE THE RESULT OF THE POWER SUPPLY VOLTAGE BEING SET AT 32 RATHER THAN 24 VOLTS. WHEN THE POWER SUPPLY WAS RESET TO 24 VOLTS THE T-35 OPERATED AS PROGRAMMED.

25X1

C. THE FILM SHOWED THAT THE CAMERA HAD BEEN CYCLED AT []

[] PRIOR TO TAKEOFF. OPERATION WAS NORMAL.

25X1

D. TWO NORMAL FRAMES WERE RECORDED AT [] DURING POSTFLIGHT

2. FOLLOWING OBSERVATIONS WERE MADE AT [] DURING MALFUNCTION

25X1

ANALYSIS:

DOE review completed.

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A. THE SPECIAL INTERVALOMETER WHEN OPERATED ON THE BENCH COULD NOT BE MADE TO FAIL IN A MANNER THAT WOULD EXPLAIN THE LOSS OF PICTURES.

B. THE SPECIAL INTERVALOMETER INSTALLED IN T-35 S/N 302 AND CYCLED AT AMBIENT CONDITION AND AT 0.0 DEGREES F COULD NOT BE MADE TO MALFUNCTION IN A MANNER THAT WOULD EXPLAIN THE LOSS OF PICTURES.

3. CONCLUSIONS:

A. THE MALFUNCTION WAS CAUSED BY A LOSS OF PULSE FROM THE SPECIAL INTERVALOMETER. THIS WAS OBVIOUS FROM THE LACK OF MATERIAL TRANSPORT ON DATA EXPOSURES DURING THE FLIGHT. LOSS OF PULSE COULD HAVE BEEN CAUSED BY ONE OF THE FOLLOWING:

- (1) COMPONENT FAILURE SUCH AS INTERMITTENT DIODE.
- (2) OPEN SOLDER JOINT IN THE INTERVALOMETER CIRCUIT.
- (3) OPEN POWER CABLE CONNECTION.

B. ALTHOUGH WE WERE UNABLE TO REPRODUCE THE MALFUNCTION IN THE LAB BY COLD CYCLING THERE IS STILL VERY STRONG EVIDENCE THAT THE PROBLEM WAS DUE TO A FAULTY COMPONENT OR SOLDER JOINT. INTERMITTENTS OF THE NATURE ARE OFTEN SELF-HEALING. ALSO THE INTERVALOMETER BOARD HAS BEEN REMOVED FOR TRANSHIPMENT TO PRIOR TO SHIPMENT

25X1

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T-35 NO. 302.

4. RECOMMENDATIONS:

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A. IF SPECIAL CYCLING RATE APPLICATIONS ARE PLANNED FOR FUTURE MISSIONS, SHOULD BE DIRECTED TO FABRICATE AND CERTIFY A SPECIAL INTERVALOMETER CIRCUIT AND INSTALLATION KIT. THIS WILL INSURE THAT PARTS ARE SELECTED FROM QUALIFIED SOURCES AND ASSEMBLED TO CONTROLLED QUALITY STANDARDS. IN ADDITION IT WILL PROVIDE CONFIGURATION CONTROL, STATUS ACCOUNTING, AND CERTIFICATION RECORDS FOR OPERATIONAL EQUIPMENT.

B. OTHER ANOMOLIES WERE NOTED DURING THE ANALYSIS OF T-35 NO. 302. THESE WILL BE RECAPPED AND FORWARDED TO ADDRESSEE VIA LETTER.

S E C R E T

BT