

CLASSIFIED MESSAGE

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(When Filled In)

FILE INFO

REPRODUCTION PROHIBITED

ACTION


NUMBER: [REDACTED]

1048

~~TOP SECRET~~ 181657Z OCT 68 CITE [REDACTED]

PRIORITY [REDACTED] INFO PRIORITY [REDACTED]

CORONA/RESIDENT OFFICE

ATTN: [REDACTED] AT [REDACTED]

SUBJ: J-49 FORWARD CAMERA FAILURE

1. THE FOLLOWING INFORMATION IS A SUMMARY OF DATA PRESENTLY AVAILABLE. KNOWN FACTS ONLY ARE STATED. INTERPRETATION OF THE DATA TO ARRIVE AT A PROBABLE CAUSE IS CONTINUING; HOWEVER, NO CONCLUSIONS ARE EXPRESSED AT THIS TIME PENDING DETAILED ANALYSIS OF THE FILM TO EXTRACT POSSIBLE ADDITIONAL DATA WHICH MAY BE AVAILABLE FROM THAT SOURCE.

2. SOURCES AND DATA FACTS ARE AS FOLLOWS:

A. FLIGHT T/M DATA

1. T/M COMMUTATOR (STATUS DATA) FAILED TO START ON REV. 175 THRU REV. 223. STARTED ON REV 224 AFTER MAIN WATER SEAL CLOSED.
2. REV. 182 [REDACTED] INDICATED A CONTINUOUS ELECTRICAL LOAD OF 1.2 AMPS REGULATED POWER AND 3.5 AMPS UNREG POWER. ELECTRICAL LOAD WAS EQUIVALENT TO A SINGLE PAN CAMERA OPERATING.

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- 3. REV. 183 [REDACTED] VERIFIED REGULATED POWER LOAD WAS FROM PAYLOAD SYSTEM. FORWARD CAMERA UNIT INPUT METERING CONTROL WAS IN 99 PERCENT SHOWING SHUTTLE HAD BEEN ON OUTPUT SIDE AT LAST CONTROL CHANGE.
- 4. REV. 193 [REDACTED] VERIFIED FORWARD UNIT HAD FAILED. THE LENS DRIVE LINKAGE AND THE METER/CONTROL LINKAGE WERE BOTH INOPERATIVE. S/I UNIT WAS NOT CYCLING. S/I CONTROL AND POWER LOAD INDICATED THE INTERNAL OPERATE COMMAND FOR THE FORWARD UNIT WAS ENERGIZED BUT FAILURE OF CONTROL LINKAGE PREVENTED UNIT FROM SHUT DOWN.
- 5. REV. 224 [REDACTED] AND REV. 231 VERIFIED THE FORWARD UNIT DRIVE MOTOR AND TACH WERE OPERATING AND APPEARED NORMAL. SYSTEM TEMPERATURES WERE NORMAL. CYCLE COUNTER ON FORWARD UNIT INDICATED THE CONTROL LINKAGE HAD STOPPED AFTER THE "CENTER-OF-FORMAT" COMMAND ON THE 71ST FRAME ON REV 181. TWO OPERATIONS WERE PROGRAMMED FOR REV 181, THE FIRST WAS 46 FRAMES AND THE SECOND WAS 49 FRAMES FOR A TOTAL OF 94 FRAMES.

2. FILM ANALYSIS DATA

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1. TAIL OF FORWARD UNIT FILM WAS TORN (NOT CUT) AND CONTAINED APPROXIMATELY 6 INCHES OF THE FORMAT FROM FRAME 70 OF REV 181.
2. BINARY TIME FROM FRAMES 58 THRU 68 ON REV 181 SHOWED A CONSISTENT CYCLE PERIOD OF 2.298 SECONDS. THE CYCLE PERIOD BETWEEN FRAMES 68 AND 69 CHANGED TO 2.230 SECONDS OR A RATE INCREASE OF 2.8 PERCENT.
3. FAIL OUTLINES ON THE PARTIAL 70TH FRAME OF REV 181 INDICATES THE FILM IN IN-THE-RAILS AT THE TIME OF EXPOSURE.
4. LAST 43 FEET OF FILM FROM FORWARD UNIT WAS DAMAGED.
5. FILM SPLICE WAS LOCATED 422 FEET PRIOR TO TORN END OF FORWARD UNIT FILM.
6. AFT UNIT FILM SUPPLY WAS DEPLETED ON FRAME 20 OF A 90 CYCLE OPERATION ON REV 216.
7. RECOVERED TAKE-UP ABNORMALITY
  1. AFT UNIT FILM SEVERELY TANGLED IN FORWARD UNIT SPOOL AND IN S/I TAKE-UP/PUCK-ARM ASSEMBLY. LOOPS OF FILM AROUND BOTH TAKE-UP SPOOLS.
  2. BOTH TAKE-UPS JAMMED.

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3. ALL RESISTANCE CHECK ON THE CAPSULE WERE NORMAL.
  4. VERIFIED BRAKE RELEASE AND TAKE-UP MOTION WAS NORMAL ON BOTH UNITS.
  5. AFT UNIT WRAPS FELT SNUG EXCEPT FOR TOP FEW WRAPS.
  6. FORWARD UNIT WRAPS FELT SOFT AND LOOPS OF FILM PROJECTING TRANSVERSELY FROM UNDER OUTER WRAPS.
  7. S/I TAKE-UPS WERE OFF-SPOOLED.
  8. AFT FILM WAS CUT AT A POINT FARTHEREST FROM SMOOTH WRAP.
  9. MAJORITY OF AFT FILM WAS THEN REMOVED FROM TAKE-UP SPOOL AND PROCESSED IN NORMAL MANNER.
  10. FORWARD UNIT TAKE-UP SPOOL REMAINED JAMMED.
  11. PUCK-ARM ASSEMBLY WAS REMOVED BUT REQUIRED FILM TO BE UNTANGLED FROM AROUND THE FORWARD UNIT PUCK-ARM.
  12. FOUND TAIL END OF AFT UNIT FILM AND HAND OFF-SPOOLED BACK TO CUT (REF. PARA C8 ABOVE). THIS SEGMENT OF FILM MEASURED 89 FEET.
  13. TORN END OF FORWARD UNIT FILM WAS THEN FOUND WITH 3 TO 4 FEET OF UNSPOOLED FILM.

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- 14. OFF-SPOOLING OF THE FORWARD UNIT FILM WAS STARTED AND A SOFT, IRREGULAR WRAP WAS NOTED. FORTY-THREE FEET OF DAMAGED FILM WAS OFF SPOOLED BEFORE THE TAKE-UP WRAP FELT ACCEPTABLE. THIS DAMAGED SEGMENT WAS CUT AND REMOVE.
- 15. NORMAL DEFILMING WAS THEN UTILIZED FOR THE REMAINING FORWARD FILM.
- 16. THE 43 FOOT SEGMENT CONTAINED SEVERE SCRATCHES AND DISTORTIONS ALONG THE SIDE WHICH THE PUCK-ARM TRAVELLED. ALSO THE LAST 3 TO 4 FEET OF THE FILM CONTAINED A VARIETY OF CREASES.
- 17. INSPECTION OF THE EMPTY CAPSULE REVEALED:
  - A. NO TORN OR LOOSE PIECES OF FILM
  - B. SCORING OF THE FORWARD UNIT SPOOL FLANGE BY THE PUCK-ARM.
  - C. FORWARD UNIT PUCK-ARM WAS BENT, HOWEVER, SOME OF THE BENDING MAY HAVE OCCURRED WHILE ATTEMPTING UNTANGLE OF THE FILM.

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