





6075 AIRCRAFT TEST BY WASHINGTON AFB CALIFORNIA

WITH PROPELLANT INJECTION COMMENCING ALMOST SIMULTANEOUSLY WITH  
RECEPTION OF THE SECOND BURST SIGNAL FOR MISS. VEHICLE ENGINE  
SUCO OPERATOR TAKING 9.0 SEC WITH VIBRO OCCURRING AT T TIME 156.7  
SEC. INFORMATION WAS RECEIVED BY A GROUND STATION CORDED AT  
T TIME 142.8 SEC. GROUND STATION SYSTEM DATA INDICATE THE  
BORNEO COAST AFOUR ALTITUDE WAS 123.63 MI (NORMAL:123.5000)  
AND THE BORNEO COAST AFOUR VELOCITY WAS 9470 FPS (NORMAL:9514FPS).  
THIS 330 WAS THE FIRST AIRCRAFT BORNEO TO BE RECEIVED WITH A  
MODIFIED SKINER ENGINE IN AN ATTEMPT TO REMEDY THE LOUIN-  
DUAL OSCILLATION PROBLEM. TEST AND ACMA INVESTIGATION  
INDICATED NO SIGNIFICANT IMPROVEMENT.

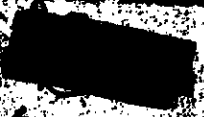
7. ACMA AIRFRAME AND ANALYSIS - OBJECTIVE ACHIEVED.

NO EVIDENCE OF STRUCTURAL PROBLEMS IN THE ACMA AIRFRAME  
OR ADAPTER WAS BEEN NOTED.

THE ENGINE DESIGN SATISFACTORILY PROVIDED THE THRUST  
NECESSARY FOR CORRECT SEPARATION AT T TIME 145.1 SEC.

8. ACMA PROPELLANT SYSTEM - OBJECTIVE ACHIEVED.

ACMA ENGINE SEPARATION OCCURRED IN A NORMAL MANNER AT  
T TIME 204.8 SEC AND THE ENGINE CHANGED SATISFACTORILY FOR 236.0  
SEC. ENGINE SEPARATION OCCURRED AT T TIME 112.8 SEC DUE TO PRO-  
PELLANT INJECTION. THE EXPERIMENTAL DATA SHOW THAT THE THEORETICAL  
SEPARATION VELOCITY GAIN OF 16,000 FPS HAS BEEN ATTAINED AT 137.2  
SEC OR APPROXIMATELY 1.6 SEC PRIOR TO THE ACTUAL SEPARATION. THE  
INJECTION WAS NOT EFFECTIVE IN PRODUING SEPARATION INCLUDING AERIAL



6975 AIRBORNE TEST OF COMMAND AND CALIFORNIA

OF THE AIRBORNE CIRCUITRY WAS NOT SCHEDULED UNTIL APPROXIMATELY  
139.7 SEC. INTERPOLATION OF INTEGRATED DATA INDICATES THAT THE  
TOTAL AIRBORNE VELOCITY GAIN WAS 16,000 FPS. THE INITIAL PROBLEMS  
AT THE AERIAL ENTRY WAS DUE TO GOVERNMENT TO GIVE THE VEHICLE  
INITIAL VELOCITY AT THE PLANNED DEJECTION ALTITUDE.

D. AERIAL ELECTRICAL POWER SYSTEM - OBJECTIVE ACHIEVED.

NO EVIDENCE OF AERIAL ELECTRICAL POWER SYSTEM PROBLEMS HAS  
BEEN NOTED.

E. AERIAL GUIDANCE AND FLIGHT CONTROL SYSTEM - OBJECTIVE  
PARTIALLY ACHIEVED.

THE AERIAL GUIDANCE SYSTEM RESPONDED PROBABLY TO A 6.25 SEC  
TIME-TO-YIELD CORRECTION AND A 2.21 SEC VELOCITY-TO-BE-GAINED  
CORRECTION OCCURRED AT THE AERIAL ENTRY POINT. VEHICLE  
ATTITUDE APPEARS TO HAVE BEEN CONTROLLED SATISFACTORILY DURING  
THE COAST PHASE AND THE INITIAL BURN PHASE, AND CONTROL GAS  
EXHAUSTION WAS NORMAL DURING BOTH OF THESE PHASES. ENGINE SHUT-  
DOWN WAS NOT OBSERVED BY THE OPERATOR BECAUSE ARIING OF THE  
SERVICING CIRCUITRY HAD NOT OCCURRED BEFORE THE INTEGRATOR HAD  
GAINED THE TARGETING VELOCITY. THE D-TIMER SUCCESSFULLY CONTROLLED  
THE TIME AND SEQUENCE OF ALL PROGRAMMED EVENTS THAT WERE SCHEDULED  
TO OCCUR PRIOR TO LOSS OF TELEMETRY DATA AT VIB.

F. AERIAL REAR COMMUNICATIONS SYSTEM - OBJECTIVE ACHIEVED.

OPERATION OF THE ACQUISITION BEACON AND THE RADAR BEACON WAS  
SATISFACTORY. THE TRACKING OF ACQUISITION BEACON FROM LIFTOFF TO

**1. PRE-LAUNCH CONDITIONS - OBJECTIVE ACHIEVED.**

THE PRE-LAUNCH CHECKS AND THE RADAR RANGE FROM LIFTOFF TO T PLUS 479 SEC. AT T PLUS 479 SEC. THE TIME OF TRANSMITTED DATA PASE FOR VTB, ALL INSTRUMENT CHANNELS WERE OPERATING. AT THIS TIME THE SIGNAL STRENGTH WAS NOT AT 100% BUT, IN THE RANGE-IN POSITION, IN THE INCREASE RANGE AND ALTERNATE IN-RANGE RANGE STATE. NO CRISIS OCCURRED WHILE TEST DURING THE ABOVE RANGE.

**C. AEROSPACE ENGINE INSTRUMENTS - OBJECTIVE ACHIEVED.**

ENGINE AND ORBITAL RANGE INSTRUMENT WAS SATISFACTORILY ACCOMPLISHED DURING THE PRE-LAUNCH CONDITIONS BY THE AEROSPACE ENGINE INSTRUMENT. DURING TASK 15 A POWER AMPLIFIER IN THE BLACK-BOARD LANGUAGE ONLY WERE BEING MONITORED PERIODICALLY "CHECKER" DATA, REPRODUCED. ELECTRICAL POWER WAS RESTORED AND NORMAL OPERATION PROCEEDED.

**E. DEDUCTIVE SYSTEM FACILITIES - OBJECTIVE ACHIEVED.**

THE AREA TRANSMITTED SIGNAL WAS RECEIVED AND RECORDED BY VTB FROM LIFTOFF TO T PLUS 500 SEC AND GOOD FLIGHT DATA WERE DERIVED FOR THE PERIOD FROM LIFTOFF TO T PLUS 510 SEC. THE VTB TRANSMITTED SIGNAL PROVIDED GOOD SIGNALS AND DIGITAL DATA RECORDS FOR THE PERIOD FROM LIFTOFF TO LOSS OF TRACK AT T PLUS 479 SEC WITH AN INTERMEDIATE LOSS OF 7 SEC STARTING AT T PLUS 315 SEC. STATION COMMUNICATIONS DURING THE LAUNCH OPERATION WERE ADEQUATE.

**3. PRE-LAUNCH CONDITIONS**

THE CONDITIONS STARTED AT 0930 HRT ON 5 NOV 67 AND PROCEEDED TO LIFTOFF WITH NO HOURS. THE FOLLOWING TABLE...

VTD



