

A7 SER NO. ACFT 158188		A8 MODEL A/C A/M		A6 REPORTING CUSTODIAN UNIT <u>VMA-331</u>		<input type="checkbox"/> EMBARKED <input checked="" type="checkbox"/> DISEMBARKED		SHIP STATION MCAS Beaufort, S.C.	
A7 SER NO. ACFT 2-75A		A8 ACFT. CLASS <input checked="" type="checkbox"/> MAJOR <input type="checkbox"/> MINOR		A9 ACFT. DATE 30 Nov 74		A10 TIME (Local) 0918(S) DAY		A11 <input checked="" type="checkbox"/> DAWN <input type="checkbox"/> DUSK <input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	
A12 ACCIDENT LOCATION 343 RADIAL, 22NM OZR VORTAC						LATITUDE 85° 49' W		LONGITUDE 31° 34' N	

SECTION B - PILOT/FLIGHT CREW DUTY ASSIGNMENT
(Complete a separate Section B for each aircraft involved)

B1 PILOT IN COMMAND/FLT. LDR. (Last, First & Middle) DOBROW, Robert Harvey			B2 RANK 1stLT		B3 SERV BR USMC		B4 SSAN/DESIG [REDACTED]/7501		B5 CAUSE FACTOR <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		B6 AGE 27	
B7 SEAT POSITION AT TIME OF ACCIDENT (Check applicable items)								B8 UNIT ASSIGNED VMA-331				
FRONT <input checked="" type="checkbox"/>	REAR	LEFT	RIGHT	OTHER (Specify)								
B9 PILOT/COPILOT (Last, First & Middle) N/A				B10 RANK		B11 SERV BR		B12 SSAN/DESIG		B13 CAUSE FACTOR <input type="checkbox"/> YES <input type="checkbox"/> NO		B14 AGE
B15 SEAT POSITION AT TIME OF ACCIDENT (Check applicable items)								B16 UNIT ASSIGNED				
FRONT	REAR	LEFT	RIGHT	OTHER (Specify)								
B17 PILOT/COPILOT/OTHER (Last, First & Middle) N/A				B18 RANK		B19 SERV BR		B20 SSAN/DESIG		B21 CAUSE FACTOR <input type="checkbox"/> YES <input type="checkbox"/> NO		B22 AGE
B23 SEAT POSITION AT TIME OF ACCIDENT (Check applicable items)								B24 UNIT ASSIGNED				
FRONT	REAR	LEFT	RIGHT	OTHER (Specify)								

SECTION C - FLYING EXPERIENCE

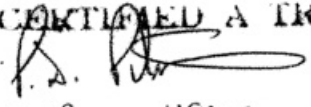
C1 ASSIGNED DUTY ON FLIGHT SCHEDULE OR YELLOW SHEET (Last Name)	PILOT IN COMMAND FLIGHT LEADER		PLT/CP		PLT/CP/ OTHER		OTHER		OTHER	
C2 TOTAL FLYING HOURS	607.0		652.9		655.7					
C3 TOTAL TIME ALL SERIES THIS MODEL	459.3		493.2		493.2					
C4 TOTAL TIME ALL SERIES THIS MODEL LAST 90 DAYS	73.0		73.0		73.0					
C5 TOTAL NIGHT TIME ALL SERIES THIS MODEL LAST 90 DAYS	9.3		9.3		9.3					
C6 TOTAL SHIPBOARD HELO LANDINGS D _____ /N _____	NONE									
C7 TOTAL CV LANDINGS THIS MODEL D _____ /N _____	NONE									
C8 TOTAL (Fixed Wing) CV LANDINGS LAST 30 DAYS D _____ /N _____	NONE									
C9 DATE OF LAST NATOPS CHECK INDICATE QUAL. NOT QUAL. COND QUAL	3Jan74		Qualified							
C10 INSTRUMENT CARD TYPE/EXPIRATION DATE	Standard		31Oct75							
C11 YEARS DESIGNATED NAVAL AVIATOR/NFO	ONE									
SYNTHETIC TRAINER SUMMARY - (Last 90 days)										
C12 EMERGENCY PROCEDURES TRNR	None (Not available MCAS Beaufort)									
C13 INST TRAINER	None (Not available MCAS Beaufort)									
C14 WST										
C15 OTHER										

VERIFIED A TRUE COPY
F. X. Pitt
CAPT USMC

SECTION G - DAMAGE
(Complete a separate Section G for each aircraft involved)

G1 PROPERTY DAMAGE COST		PRIVATE COST	GOVERNMENT COST
G8		G8	G8
G2 AIRCRAFT DAMAGE			
<input checked="" type="checkbox"/> DESTROYED	<input type="checkbox"/> MINOR	<input type="checkbox"/> LIMITED	<input type="checkbox"/> SUBSTANTIAL
G3 A/C BEYOND ECON REPAIR		G4 DIR WARRORS TO REPAIR	G5 A/C EST REPAIR COST
<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		
G6 FINAL A/C RESTING POINT IF NOT RECOVERED		G7 A/C MODEL AND BUREAU NO.	
" LATITUDE " LONGITUDE		A/M 158188	
G8 DESCRIPTION (Describe briefly extent of aircraft and property damage incurred)			

Aircraft totally destroyed. Wreckage confined to hole with dimensions of 40' X 35' X 8' deep. Some small components and structural material scattered around hole for approximately 200'. Crater was excavated to recover engine. Turbine section located 18' below ground level and compressor section located 20' down. U. S. Army engineers arranged with owner of wooded area where crash occurred to fill hole and improve farm road used to gain access to crash site. Owner agreed not to file claim. Cost of damage is unknown.

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 R. A. [unclear]
 CAP USMC

Mr. Dickson 57

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST 3750.6J

MEMORANDUM

14 January 1975

From: CDR J. M. FULCHER
To: Commander, Naval Safety Center
Via: 13 *A*, 10 *✓* 01 *[initials]*

Subj: NAVSAFECEN Aircraft Accident Investigation 22-75;
submission of

- Encl: (1) Summary Report of Aircraft Mishap Board Conclusions and Recommendations; VMA THREE-THREE-ONE 301530Z DEC 1974
- (2) NAVAIREWORKFAC JACKSONVILLE Engineering Investigations 090011Z/202020Z DEC 1974/092204Z JAN 1975
- (3) NAVAIREWORKFAC PENSACOLA Engineering Investigations 192230Z/202341Z DEC 1974

1. A-4M, BUNO 158188, assigned to MARINE ATTACK SQUADRON THREE-THREE-ONE, based at MCAS Beaufort, South Carolina, crashed and was destroyed (ALFA), 22 miles northwest of Cairns Army Air Field, Ozark, Alabama, on private property, at 1052 local on 30 November 1974. The pilot, 1ST LT R. H. DOBROW, USMCR, 092-36-9199/7501, ejected and received fatal injuries. Damage to private property was minimal.

2. The aircraft was on a scheduled IFR cross-country return flight from NAS Pensacola, Florida. The pilot had leveled at FL310 and subsequently requested a climb to FL350 in order to remain clear of weather. Jacksonville Center reported loss of radio and radar contact with BUNO 158188 at 1532Z at an altitude readout of 32,900 feet. When located, the crash site, canopy, seat and body of the pilot were separated by several miles.

3. The engine was shipped to NAVAIREWORKFAC Jacksonville, Florida, for engineering analysis. It was determined that the engine had failed catastrophically in flight due to severe FOD and had little or no RPM at impact. Best evidence pointed to the VSCF (variable speed control frequency) generator as the source of the FOD.

4. Selected aircraft components were delivered to NAVAIREWORKFAC Pensacola, Florida, for engineering analysis, and the significant results of this investigation revealed that the EPP (emergency generator), had been deployed and was turning at impact. Since radio and radar contact were not regained, the EPP apparently failed to restore power. There was also indications that the elevator disconnect had been actuated.

5. Recovered portions of the VSCF were hand carried to GE (General Electric), Erie, Pennsylvania, (the manufacturer), for

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NAVSAFECEN AIRCRAFT ACCIDENT INVESTIGATION 22-75


further analysis. A second failed VSCF generator was also delivered and analyzed concurrently with the investigation of the mishap generator. The investigation confirmed that the generator from the crash site had suffered a case separation, loss of coolant/lubrication and had subsequently failed in flight. It was also confirmed, however, that the generator did not fail catastrophically, i.e., disintegrate due to overspeed. Later investigation at NAVAIREWORKFAC Jacksonville, with GE, PWA, NAVAIR and NAVSAFECEN participation, concluded that the generator case separation had allowed the unit to "droop" from its linear axis sufficiently to interfere with, or flail against, the compartment housing. Pieces of the sheet metal housing and VSCF then became FOD.

6. All components relating to the unsuccessful ejection attempt were hand delivered to NAVAIREWORKFAC, Pensacola, Florida, for engineering analysis. Representatives from NADC Warminster, Pennsylvania, NAVAIRECOVFAC, El Centro, California, Douglas Aircraft Corporation, and the NAVSAFECEN investigator, participated in a joint investigation of the subject components. It was determined that the ejection seat functioned normally up to the sequence involving man/seat separation. It was further determined that the parachute had been manually activated (pilot pulled D-Ring), but did not completely deploy, and was fouled with the raft, seat pan deployment line and pilot. There was evidence that the ditching handle was improperly seated in its detent, negating automatic parachute deployment and that the RSSK-8 seat pan was not locked and came open at man/seat separation, allowing the bottom half of the kit to hang up, resulting in raft deployment and subsequent parachute fouling.

7. COMNAVAIRSYSCOM has directed that changes in both the RSSK-8 and ESCAPAC IF3 be incorporated to prevent the factors which proved fatal in this mishap.

8. Numerous inflight case separations of the GE VSCF have been documented. All A-4M aircraft equipped with VSCF were grounded pending incorporation of Airframes Change No. 460 to the generator, which improves case integrity. An installed modified VSCF under the cognizance of NAVAIR is undergoing current flight testing, and should shed additional light on this problem. In addition, adherence to a rigid quality assurance program, and scheduled quality audit at the contractor, is expected to improve unit reliability.

Very respectfully,


CDR J. M. FULCHER

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