AIRCRAFT ACCIDENT

IDENTIFICATION

NO.

2735

5-19

6-15

File No.:
FF12-5/A25 14512

COMMANDER AIR FORCE
UNITED STATES PACIFIC FLEET

Serial No.:
30/

U. S. Naval Air Station,
San Diego, California.

RESTRICTED
SECURITY INFORMATION

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25 JUN1953

THIRD ENDORSEMENT on VA-55 AAR 1-53 of 5 June 1953 concerning AD-4L BUNO 123999

From: Commander Air Force, Pacific Fleet
To: Chief of Naval Operations (OP-53)

Subj: VA-55 Aircraft Accident occurring 19 May 1953

Ref: (a) OPNAV Instruction 3750.6

1. Forwarded, concurring in the conclusions and recommendations of the Aircraft Accident Board and the subsequent endorsements.

2. In accordance with reference (a), the basic report and the Second Endorsement are hereby upgraded to Restricted.

J R Compton

J. R. COMPTON
By direction

Copy to:
BUAER (2)
NAVSAFACT
CO, ATG TWO
CO, VA-55
BAR, EL SEGUNDO, CALIFORNIA

2755 1

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A25

IN REPLY REFER TO

UNITED STATES PACIFIC FLEET
AIR FORCE
AIR TASK GROUP TWO
C/O FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

ATG-2/ffc
FF12-1/A25
Serial: 52

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8 June 1953

SECOND ENDORSEMENT on VA-55 AAR 1-53 of 19 May 1953

From: Commander Air Task Group TWO
To: Chief of Naval Operations (Attn: OP-53)
Via: Commander Air Force, Pacific Fleet

Subj: Aircraft Accident Report; forwarding of

1. Forwarded, concurring with the conclusions and recommendations of the accident board and the First Endorsement.

C. G. Wall
C. G. WALL
By direction

Copy to:
CO, VA-55

2755 2

32867

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UNITED STATES PACIFIC FLEET
AIR FORCE
ATTACK SQUADRON FIFTY-FIVE
c/o Fleet Post Office
San Francisco, California

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JUN 5 1953

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FIRST ENDORSEMENT on VA-55 AAR 1-53 of 19 MAY 1953

From: Commanding Officer
To: Chief of Naval Operations (Attn: OP-53)
Via: (1) Commander, Air Task Group TWO
(2) Commander Air Force, Pacific Fleet

Subj: Aircraft Accident Report; forwarding of

1. Forwarded concurring with the conclusions of the board and with their statement that, inasmuch as the exact cause of the engine failure is indeterminate, no specific recommendations are considered to be of value.

2. This squadron had, prior to the accident, instituted a policy of inspecting the MAP Regulator throttle rod bolts (WD P/N 108133) at periodic intervals as recommended by BuAer dispatch 052003Z of May 1953. This inspection was scheduled for each intermediate check and was so noted on the check form. Inasmuch as the aircraft involved had 10.1 hours to go before the next scheduled intermediate check, the inspection of the MAP regulator throttle rod bolts was not accomplished prior to the engine malfunction. It is felt that, although symptoms during the failure of the engine indicate possible MAP regulator discrepancy, it is in error to attribute failure solely to this cause.

3. Submission of this report was withheld by the board pending results of salvage operations which were discontinued 1 June 1953 with negative results. It was believed that inspection of the aircraft, if recovered, would have given some positive indication as to the cause of engine failure.

J. T. Dowler

J. T. DOWLER

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AIRCRAFT ACCIDENT REPORT
OPNAV-FORM-3750-1 (REV. 11-51)

PAGE 1 OF 4 PAGES
OPNAV REPORT-3750-1

THE AIRCRAFT ACCIDENT BOARD SHALL SUBMIT THIS REPORT TO THE C.O. OF THE ACTIVITY CONDUCTING THE INVESTIGATION. IT SHALL THEN BE FORWARDED BY THE C.O. IN ACCORDANCE WITH CURRENT AAR INSTRUCTIONS.

1. DATE OF ACCIDENT	HOUR	2. ACTIVITY SUBMITTING REPORT	3. AAR SERIAL NO.
19 May 1953	0940 T	VA-55	1-53

4. MODEL A/C	BUNO.	CHECK DAMAGE TO A/C	5. REPORTING CUSTODIAN OF A/C
AD-4L	123999	[X] A [ ] B [ ] C [ ] D [ ] E	VA-55

6. NAME OF UNIT OPERATING THE A/C	BASED AT	OPERATIONAL CHAIN OF COMMAND
VA-55	NAS, MIRAMAR	ATG-2, ComAirPac

7. LOCATION OF ACCIDENT	8. UNIT TO WHICH OPERATOR ATTACHED
[redacted]	VA-55

9. PERSONNEL INVOLVED (Including name and injury code of crew injured, not occupants of A/C)

A FULL NAME, RANK, SERVICE, FILE NO. (List person in control first)	B	C BILLET	D POSITION	E INJURY
Charles A. Kelly, LT, USNR-A, 453628		Pilot	Cockpit	D

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10. PILOT EXPERIENCE	TOTAL ALL MODELS	TOTAL THIS MODEL	LAST 12 MONTHS ALL MODELS	LAST 3 MONTHS ALL MODELS	LAST 3 MONTHS THIS MODEL	INSTRUMENT RATING: Standard
TOTAL HOURS	874.7	44.1	165.6	62.2	44.1	PILOT'S AGE: 28
INSTRUMENT HOURS			26.3	16.2	1.5	
NIGHT HOURS			5.4	2.9	1.5	DATE DESIGNATED:
CV LANDINGS	21	None	None	None	None	April 1945

11. CHECK IF	12. PURPOSE OF FLIGHT	CODE	13. TIME IN FLIGHT
[X] INCIDENT TO FLIGHT [ ] NOT INCIDENT TO FLIGHT	Glide Bombing Practice	1A721	00-06

14. TYPE OF ACCIDENT	CODE	15. MANEUVER INVOLVED
Water landing due to loss of power	B	Carrier type rendezvous after take off

16. WEATHER	CEILING	VISIBILITY	17. DARKNESS?	18. CLEARANCE ISSUED
[ ] VFR [X] IFR	900'	2-3 MI	[ ] YES [X] NO	VFR

19. WIND DIRECTION	FORCE	20. ANGLE OF IMPACT	STOPPING DISTANCE	SPEED ON IMPACT	21. DID FIRE FOLLOW IMPACT?
225	4 KTS	Level-0°	Unknown	80 KTS	[ ] YES [X] NO

22. AIRCRAFT AND ENGINE DATA (Fill in all data in every case of material failure or malfunction, actual or suspected)

HISTORY	SERVICE TOUR	TOTAL NUMBER OF OVERHAULS	MONTHS IN THIS TOUR	FLT HOURS SINCE OVERHAUL	FLT HOURS SINCE ACCEPTANCE	TYPE OF CHECK LAST PERFORMED	FLT HOURS SINCE CHECK	NO. DAYS SINCE CHECK
AIRCRAFT	2ND	One	Two	55.3	592.0	1st Intermediate	19.1	14
ENGINE 1		One		62.8	629.2	1st Intermediate	19.1	14
ENGINE 2								
ENGINE 3								
ENGINE 4								

HAS THIS A/C BEEN DAMAGED IN PREVIOUS ACCIDENT(S) DURING PRESENT SERVICE TOUR? [ ] YES [X] NO (IF "YES", GIVE DATE(S) OF PREVIOUS ACCIDENT(S))

23. CONTRIBUTORY FACTORS (Check or fill in only one primary "P" factor, all others secondary "S")

P	S		P	S		P	S	
		PILOT (OR CREW) ERROR	X		MATERIAL FAILURE OR MALFUNCTION			
		ERROR OF OTHER PERSONNEL						

24. CHECK CONDITIONS INVOLVED IN THIS ACCIDENT (List other)
[ ] X-WIND, STACKWASH, SLIPSTREAM, TURBULENCE [ ] PITCHING OR ROLLING DECK [ ] COMMUNICATION DIFFICULTY [ ] AIRPORT HAZARD [ ] ROUGH SEAS [ ] TERRAIN CONDITIONS

25. EMERGENCY CONDITIONS
[X] IMMEDIATE FORCED LANDING [ ] PRECAUTIONARY LANDING [X] ENGINE FAILURE [ ] FUEL EXHAUSTION OR NEAR EXHAUSTION

26. PERSONNEL SAFETY EQUIPMENT USED
[ ] PARACHUTE [ ] EJECTION SEAT [X] SHOULDER HARNESS [X] SAFETY BELT [ ] EXPOSURE SUIT [ ] G-SUIT [X] PROTECTIVE HELMET [ ] OXYGEN EQUIP.
[X] LIST OTHERS: Life Vest, Pararaft, Gloves, Knife

27. ENCLOSURES AND DISTRIBUTION CHECK OFF LIST.

CHECK	ENCLOSURES	CHECK	NO.	DISTRIBUTION BY COMMANDING OFF.
X	STATEMENT OF PILOT	X	ORIG.	CNO (OP-531) VIA CHN. OF COMD.
	STATEMENT OF OTHER	X	1CC	~~CO, ATG (OP-30)~~ DIRECT NAVAVSAFACT
X	ENG. OFF.	X	2CC	BUAER DIRECT
	CAT. OFF.			CHECK AND LIST OTHERS AS REQUIRED
X	WITNESSES	X	1CC	COMAIRPAC DIRECT
	OTHERS	X	1CC	ATG-2
	PHOTOGRAPHS	X	1CC	BAR EL SEGUNDO
	DRAWINGS	X	1CC	FILE
	WEATHER REPORT			
	LOADING MANIFEST			

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28. SIGNATURE AND TITLE OF COMMANDING OFFICER

A. J. Yates
A. J. YATES, LTJG, USN
Flight Officer

F. D. Fuller
F. D. FULLER, LT, MC, USN
Flight Surgeon

J. A. Moon
J. A. MOON, LT, USNR,
Safety Officer

F. E. Brunner
F. E. BRUNNER, LT, USNR,
Maintenance Officer

DATE SUBMITTED TO C.O.: 5 June 1953

29. THE ACCIDENT

LT. C. A. KELLY departed with a VFR flight clearance from USNAS Miramar as part of a flight of five AD type aircraft led by LT. T. T. DAVENPORT. The flight was scheduled for glide bombing practice at a local target. After flying a few minutes on take off heading, the flight commenced a carrier type rendezvous above an overcast offshore. LT KELLY was flying the last plane in the flight, and while turning to rendezvous, he noticed a loss of engine power. LT KELLY advanced his throttle but after experiencing a further loss of power, advanced his mixture control to rich, prop control to full low pitch, and turned on the auxiliary fuel pump. The pilot states that all engine instruments were indicating a normal reading with an indicated 32 inches of manifold pressure, but he continued to lose airspeed.

LT KELLY elected to proceed to North Island for an emergency landing. W an indicated airspeed of 130 knots he was unable to maintain altitude and ther fore started to let down through the overcast with a rate of descent of approx imately 300 feet per minute. The aircraft broke into the clear between 700 an 900 feet over water, and LT KELLY turned to a heading of 240° mag., and made a water landing using full flaps. The pilot cleared the aircraft without difficulty, and the plane sank in approximately one minute.

30. DAMAGE TO THE AIRCRAFT

The aircraft sank in approximately thirty feet of water, one mile off shor No structural failure was noted by the pilot during impact. Salvage operations were attempted with negative results.

31. THE INVESTIGATION

The accident board took the following steps in their investigation:

1. Consulted maintenance personnel.
2. Reviewed log books.
3. Interviewed the pilot.
4. Interviewed the other members of the flight.
5. Consulted the Wright representative.

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The following possibilities were considered:

1. Internal engine failure.
2. Failure of the manifold pressure regulator bellows.
3. Internal failure of the manifold pressure regulator.
4. Break in the induction system.
5. Carburetor Ice.
6. Failure of throttle linkage.

Salvage operations were commenced on 21 May 1953 and discontinued on 1 June 1953 with negative results.

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32. THE ANALYSIS

Before and during take off the engine operated normally. LT KELLY was able to join with the aircraft ahead prior to the rendezvous turn without difficulty. He flew close formation for a short time without noting any malfunction of the engine up until the time extra power was needed to expedite the join-up. He added throttle, but the engine did not respond. LT KELLY checked the flight and engine instruments but found only a lack of manifold pressure to be improper. He discontinued his attempt to join with the rest of the flight and tried to find the source of trouble. The fact that he was able to climb from 2000 feet to 4000 feet proves a presence of power.

The climb was made as he checked the inside of the cockpit. At 4000 feet LT KELLY noticed he needed to descend in order to maintain airspeed. As he descended he noticed a continued loss of power. The following possibilities have been investigated.

(1) Internal Engine Failure -- Prior to the power failure there was no indication of a bad engine. All instruments were normal and the pilot states that there was no backfiring, cutting out, unusual vibration, black smoke, or other symptom to indicate engine trouble. When an engine fails internally at least one of these conditions should be evident and accompanied by high oil temperatures and/or high cylinder head temperature.

(2) A not uncommon occurence in AD type aircraft is the failure of the manifold pressure regulator bellows. This failure does not apply because mechanical linkage of the throttle would still control power up to about 42 inches of manifold pressure when the aircraft is airborne.

(3) Internal failure of the manifold pressure regulator was considered. Consultation with the Wright Field Representative reveals that there have been no cases on record of such a failure.

(4) A complete loss of power coupled with a break in the induction syster would give an indicated manifold pressure of approximately 30 inches (atmospher pressure). If this had been the case it is felt that the pilot would have been aware of cutting out or backfiring due to an improper fuel/air ratio caused by a faulty induction system.

(5) Carburetor Ice--the other four pilots did not have any indication of their aircraft icing up. LT KELLY did switch to alternate air but no improvement was noticed.

(6) A smooth engine operation with power loss could come from a failure the throttle linkage. There would be a tendency of the carburetor to go to the closed position.

33. THE CONCLUSION

The board members are of the opinion that a failure of the throttle linkage or manifold pressure regulator linkage was possible. At the time of such failure the engine had 32 inches of manifold pressure, and this power remained for a short time. Either due to engine vibration or changes in flight altitude the carburetor throttle went to a position where the pilot was unable to maintain power for flight.

It is felt that with the job of letting down through the overcast LT KIT centered his attention on the flight instruments and did not notice the very reduced manifold pressure. If the pilot was correct in his reading of 32" M. P., and the engine was running as stated, continued flight should have been possible.

The board believes the basic cause of the power failure was in the above mentioned linkage but the exact cause is undetermined since the aircraft was not recovered. Because of this, no specific recommendations are given.

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Statement of Lieutenant Charles Adams KEL[illegible], 1315, 493628,
Attack Squadron FIFTY FIVE

On 19 May 1953, I was scheduled for a glide bombing training flight, flight purpose code 1-A-721, in compliance with the squadron training sylabus. Take off scheduled for 0930.

After a visual external pre flight check of the aircraft, AD-4L, BuNo 123999, I entered the cockpit and started the engine without difficulty. The pre flight check on the line was completed to my satisfaction, and all was in order, including radio.

I was scheduled to fly in the number 5 position in a flight of 5, and all 5 planes taxied out to the warm up position in order.

The warm up and preflight check in the warm up position was normal, with a drop in RPM of 50-65 on each mag. All engine instruments were within normal operating limits and cylinder head temperature read 170° C.

Take off at 0930 after the fourth plane had cleared the runway, I advanced the throttle to full power, 57" Hg and 2900 turns. The engine responded normally. After clearing the runway, I retracted the wheels, and decreased the throttle to 35" Hg, and retarded RPM to 2350. I then turned off the auxiliary fuel pump and placed the mixture control in normal position.

The flight had been pre briefed as to type of join up, so flight leader continued as planned on a heading of 240° to allow time for the fifth plane to clear the runway. At about the same time that the flight leader executed his initial turn for the join up, I overtook the fourth plane and flew a wing position on him.

The fourth plane made his turn for the join up, so I turned with him. After approximately 60° of this turn had been completed, I noticed a slight loss in power, so I advanced the throttle to what would have normally been an increase in MP of 2" Hg. Power continued to decrease, and by that time, I was well behind the number four man.

I immediately advanced the mixture control to full rich and turned on the auxiliary fuel pump. Then I advanced the prop control to full RPM with a subsequent advance of the throttle to full open position and there was no increase in power. All engine instruments were reading normal (oil temp. and presure, fuel pressure, and cylinder head temp. 190° C.) except MP, which was 32" Hg.

Since all engine instruments were normal with the exception on the MP, the resultant lack of power indicated to me a possible presence of carb icing. I switched from direct to alternate air with still no increase in power. The manifold pressure remained at 32" Hg., but I did not notice the RPM.

Then I noticed the Inverter warning light was on, so I switched to standby inverter.

I depressed my throttle microphone button and attempted to call flight leader to advise him that I was unable to keep up with flight. I could hear no side tone on my ear phones, so I checked my connections to ascertain whether or not they have become disconnected accidentally. Connections were OK, so after a second attempt to transmit was in vain, I discontinued efforts both to contact flight leader and send an emergency Mayday.

I was 4000' on an easterly heading possibly a mile or two west of the beach, and had an airspeed of 180 Kts. indicated.

I was unable to hold altitude as airspeed gradually decreased, and retarding and subsequently advancing throttle resulted in no apparent increase in power output.

My first thought was to make an emergency landing at Miramar, but even though the engine was still turning over, I was afraid that it would conk out completely. The surrounding area is very uneven and I did not particularly like the idea of having to land on this terrain. Also this area is populated (between my position and the field) and an emergency landing would endanger civilian property and lives.

I elected to turn back over the water and head for North Island with the thought in mind of landing at North Island if possible, and if unable to reach it, I would ditch just off the shore line.

My gyro horizon was inoperative, so I checked my needle ball and found that it was OK.

Weather: Over Miramar - broken with visibility unrestricted. Over the ocean, solid overcast - tops 2500' with visibility unrestricted, below the overcast marginal VFR.

I entered the clouds at 130 kts indicated with a rate of decent of approximately 300-400 fpm on partial panel, and broke out below at 700' one mile to seaward west of La Jolla. The plane continued to settle, so I dumped my flaps at about 400' (gear was still retracted), and turned off the ignition switch and battery switch. I do not remember whether or not I turned off the auxiliary fuel pump and the gas.

I had opened the hatch and tightened safety belt and shoulder harness before letting down through the soup.

I took up a heading of 240° and gradually slowed down to 100 Kts, at which time I was 20-40 feet above the water approximately one mile off shore west of the amusement park at Mission beach.

The initial impact at 0936 was very slight, and was on what seemed to be the crest of a ground swell. Wind was estimated to be 5 Kts from the SW. The second impact was definitely felt but was not severe. After forward motion of the plane

had ceased, I unfastened my safety belt and climbed out of the cockpit on the left side. The right wing was slightly under water. After pushing clear of the wing, I swam clear of the aircraft, 50-75 feet, (plane sank in approx one minute) and inflated my Mae West and Para-raft. Then I secured the parachute to the large end of the raft, and climbed aboard from the small end. I pulled the chute over in my lap and was bailing out the raft when a PBM flew overhead and circled. A few minuted after the PBM made its first pass, I saw a helicopter approaching from the east.

The copter picked me up at 0944 and arrived at the Coast Guard Base, at 0946 and an ambulance took me to the Naval Hospital at Balboa. Time in water, estimated to be 8 minutes.

I was uninjured and was released from the hospital at 1600, and returned to the squadron area shortly afterwards.

Cause: Power failure

Comments: Symptons indicated a possible malfunction of MAP regulator.

C. A. KELLY

275510

ENCLOSURE 1

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Statement of LTJG L. J. KRELL, 352084/1352, USN, Assistant Maintenance Officer of Attack Squadron FIFTY-FIVE

The engine on AD4L aircraft, BuNo 123999, had a total of 60.9 hours since overhaul and 19.1 hours since first intermediate check. The aircraft completed three flights of 1.3 hours duration for a total of 4.0 hours the previous day. No discrepancies were noted. After consultation with the pilot, it is the opinion of this officer that there was no internal failure of the engine. It is felt that the manifold pressure regulator had malfunctioned either internally or by failure of linkage, closing the carburetor to the idle range.

L. J. KRELL

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Enclosure (2)

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275512

Statement of Ensign Iver ROSENDALE, 558697/1325, USNR

On 19 May 1953 I was scheduled to fly a bombing hop as #4 man in a five man formation. After individual take off I went straight ahead out over La Jolla, following the #3 man. An overcast lay over the water between about 800-1700'. After take off I throttled back to about 28" 2100 RPM and maintained about 150 knots and 500'/min rate of climb. Just after reaching the water I noticed that LT KELLY, the #5 man, had joined up with me and was flying my wing, previous to turning into a rendezvous with the rest of the flight. I looked back at KELLY just prior to my turn and he looked to be in no trouble at all. I waggled my wings, broke off and commenced my rendezvous at about 2000'. After joining up with the flight I looked left to see where KELLY was and didn't see him and figured he was directly behind me a little sucked in the rendezvous. When it became obvious that KELLY wasn't with us, I called over the radio "Where's KELLY?" This was about five minutes after the rendezvous. When the flight leader became cognizant of the fact that KELLY was missing, the flight returned to the area he was last seen and commenced a search. Search was broken off when it was known, by radio, that LT KELLY had been picked up. The flight then returned to Miramar and landed.

I. A. ROSENDALE

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Enclosure 3