AIRCRAFT ACCIDENT
IDENTIFICATION
NO.

3 03 27 102

RECORDS CODE SHEET
SND 4535 (Rev. 1-62)

NAVAL AVIATION SAFETY CENTER

GENERAL (Card No. 1)

Bureau Number	146877	16-21
Reporting Custodian	311	22-24
Type of Duty	21	25-26
Major Command	1	27
Aircraft Damage	A	28
Aircraft Injury	X	29
Maneuver prior to Accident	N	30
First Accident type	B6	31-32
First Accident phase	43B	33-35
Second Accident type		36-37
Second Accident phase		38-40
Type of Operation	3	41-42
Contributing Cause Factors	X	43-47
Pilot Factor, First		48-49
Pilot Factor, Second		50-51
Pilot Factor, Third		52-53
First other Personnel Factor		54-55
Second other Personnel Factor		56-57
Primary Major Material Factor		58
Secondard Major Material Factor		59
Design		60
Facilities		61
Special Data & Cond.	GD	62-68
Type of Flight Hazard		69
Pri. Cause/[redacted]	X	70
Causal Fac for Pri-Cause		71-72
Carrier Hull Number		73-74
No Personnel Card ("R")		80

SUPPLEMENTARY (Card No. 2)

Weather		16-21
Kind of Flight	193	22-24
Relative Wind - Direction		25
Relative Wind - Velocity		26
Relative Wind (Old Code - Not in Use)		27
Clearance	2	28
Time of Day	2	29
Number of other Aircraft		30
Altitude of Occurrence		33-35
POSSIBLE FACTORS: Contributing Cause Factors	1	36-37
POSSIBLE FACTORS: Pilot Factor	40	38-39
POSSIBLE FACTORS: Other Personnel Factor		41-42
POSSIBLE FACTORS: Major Material Factor		43
POSSIBLE FACTORS: Design		44
POSSIBLE FACTORS: Facilities		45
POSSIBLE FACTORS: Weather		46
Non-Navy Injury ("R")		47
Number of "A" or "L" or "M" Injury	01	48-49
Number of "B" Injury		50-51
Number of "C" Injury		52-53
Number of "D" Injury		54-55
Number of "E" Injury		56-57
Location	61 MIAMI FLA	63-68
Facility Data		69-74

	Dept's Control	Reserve Activity	Other Activity
ACCIDENT DAMAGE A	I.D. NO.	3 0 3	2 7 1 0 2
ACCIDENT INJURY A X A			REPA
FISCAL YEAR 3			SPECIAL ATTN ("X")

Model Code 17

Note: The above Fields are to be punched in all Coded Cards

PERSONNEL STATISTICS (Card No. 3)

File Number → (b) (6) redacted

Name	Rank/Rate	Ex Service	Age	Yrs Experience	Status	Position	Yrs in Grd	A Months A/C	Pilot Flying	Training Qualification	Instr. Card	Total Time All Models	All Models in Month	All Instrs This Month	All Instr Card in Month	CV Landings	Instrument Hours	Night Hours	Total Time Jet Models
00 PHILLIPS R	3	5	1	A	1	X	1	2	1	9	2	0	6	0	8	2	6	0	8
																	0	5	1	5	6

File Number →

Name

File Number →

Note: PERSONNEL CODED ON REVERSE SIDE ☐

CODED [illegible] REVIEWED [illegible] LOGGED [illegible] PUNCHED ____ VERIFIED ____ REVIEWED [illegible] REPUNCHED ____

CODE SHEET REVIEWED BY CLASS DESK ANALYST ____ (Signature) ____ (Date)

AAR DEPARTMENT NARRATIVE CODE SHEET

29 MAY 1963

24 OCT 1963

YEAR	MONTH	DAY	TYPE	NUMBER	DIVISION	NATURE	MODEL				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	0	3	2	7	1	0	2	4	X	R	F	8	A

XA

BUREAU NUMBER

1	4	6	8	7	7

75	76	77	78
3	1	7	6

PREPARED BY _____ RAS LOG CLERK _____ PUNCHED _____ VERIFIED _____

NARRATIVE BRIEF

FLT UNEVENTFUL UNTIL LDR ENTER DESCEND SPIRAL FR 15/18M
IAS 400 KTS & 2-3 G. LDR LEVEL AT 8M HOLD 2-3 G & NOTE
W/MAN GONE. LAST IN FORM ENTER SPIRAL. WRECKAGE OBSERVE
ON MTN BELOW AT APPROX 6M LEVEL.

PREPARED BY EP PUNCHED 20 MAY 1963 VERIFIED

COMPLETION SHEET

Action on Correction to		Action Required	Completed Code/Date
3750-1			
DIR			
Misc. Items for Action or Correction			
To Code	From Code/Date	No Close out this Per. A&R APC	

Endorsements Reviewed and Action Completed on All Phases of this Report.

CLOSED

28 OCT 1963

3

FF4-1/3750
Ser 80/ 4254

14 MAY 1963

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 70, OPNAVINST 3750.6D

THIRD ENDORSEMENT on LIGHTPHOTORON 63 AAR ser 3-63 concerning RF-8A BUNO 146877 accident occurring 27 March 1963 pilot PHILLIPS

From: Commander Naval Air Force, U. S. Pacific Fleet
To: Commander, U. S. Naval Aviation Safety Center

Subj: LIGHTPHOTORON 63 AAR ser 3-63

1. Forwarded, concurring in the comments and recommendations of the Aircraft Accident Board, and in the remarks contained in subsequent endorsements.

2. The 3/8" wrench found at the scene of the accident cannot be discounted in theorizing the cause of this accident. Maintenance personnel must be required to take an accurate inventory of tools prior to and after work has been performed on an aircraft for statistics prove that adrift tools have caused similar accidents.

3. For purposes of safety awards this accident is administratively charged to LIGHTPHOTORON 63.

A. Thomas

A. THOMAS
By direction

Copy to:
BUWEPS (F 123)
COMNAVAVNSAFECEN (2)
CINCPACFLT
COMFAIRSDIEGO
CO USS CORAL SEA (CVA 43)
COMCARAIRGRU 15
BUWEPSFLTREADREPPAC
BUWEPSREP DALLAS
CO LIGHTPHOTORON 62, 63 (4)
CO FITRON 124, 191, 91, 111, 141, 154, 162, 174, 211, 24, 51

4

FF7/3750
Serial No.:
80/1047
25 APR 1963

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 70, OPNAVINST 3750.6D

SECOND ENDORSEMENT on VFP-63 AAR ser 3-63 concerning RF-8A BUNO 146877, Pilot PHILLIPS occurring 27 Mar 1963

From: Commander Fleet Air San Diego
To: Commander, U.S. Naval Aviation Safety Center
Via: Commander Naval Air Force, U.S. Pacific Fleet

Subj: VFP-63 AAR ser 3-63; forwarding of

1. Forwarded, concurring in the comments and recommendations of the board and the first endorser.

M. J. FRANGER
CHIEF OF STAFF

Copy to:
NAVAVNSAFECEN (2)
BUWEPS
CINCPACFLT
BUWEPS REP DALLAS
VFP-62
COMCVG-15
CO, USS CORAL SEA
BUWEPSFLTREADREPAC
VF-124, 191, 91, 111, 141, 154, 162
211, 174, 24, 51, VFP-63 DETS BRAVO,
FOXTROT, MIKE, DELTA
CO, VFP-63

ORIGINAL

FF12/VFP-63
RLC:jpb
3750
Ser 504
18 Apr 1963

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 70, OPNAVINST 3750.6D

FIRST ENDORSEMENT on VFP-63 AAR Serial 3-63 concerning RF-8A 146877, Pilot PHILLIPS occurring 27 March 1963

From: Commanding Officer, Light Photographic Squadron SIXTY-THREE
U. S. Naval Air Station, Miramar 45, California
To: Commander, U. S. Naval Aviation Safety Center
Via: (1) Commander Fleet Air San Diego
(2) Commander Naval Air Force, U. S. Pacific Fleet

Subj: VFP-63 Aircraft Accident Report; forwarding of

1. Forwarded concurring with the comments and recommendations of the Aircraft Accident Board.

2. The fact that the aircraft was completely demolished upon impact and the absence of eye witnesses to the crash have to date precluded factual determinations as to the cause of this accident.

3. The let-down as described in the AAR is not considered dangerous; however, the combination of idle position of the throttle in the lead aircraft; accompanying airspeed bleed off; retracted position of the droop, and steady or possibly increasing load factor, sets the stage for a rapid series of events leading to a stall. A rapid approach to a stall at a relatively low airspeed in the RF-8A aircraft is marked by a less intense and less apparent stall warning but is followed by a more violent behavior at the stall.

4. In view of the foregoing the suggested cause as set forth in paragraph 7, part VIII of the AAR is considered to be the most feasible. LTJG PHILLIPS past performance ranked him as one of the most outstanding young aviators of this command. Nonetheless his limited experience (613 total flight hours) could have reasonably precluded his immediate recognition of the subtle factors which combined to cause the probable stall.

5. LTJG PHILLIPS had not been involved in a previous accident.

6. There were no violations of the F-8 NATOPS and no changes are recommended.

7. The last Flight Safety Survey of this command was completed 31 October 1962.

8. NAVAIRPAC Report Symbol 3750-1 has been submitted.

R. L. Clarke
R. L. CLARKE

Copy to:
NAVAVNSAFECEN (2 DIRECT)
BUWEPS (1 DIRECT)
CINCPACFLT
COMNAVAIRPAC
COMFAIRSDIEGO
BUWEPS REP DALLAS
VFP-62
COMCVG-15
CO, USS CORAL SEA
BUWEPSFLTREADREPPAC
VF-124, 191, 92, 111, 141, 154, 162,
211, 174, 24, 51, VFP-63 DETS BRAVO,
FOXTROT, MIKE, DELTA

VFP-63

6

ORIGINAL

AIRCRAFT ACCIDENT REPORT
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SPECIAL HANDLING REQUIRED in accordance with Para. 65, OPNAV INSTRUCTION 3750.6C

OPNAV REPORT 3750-1

PART I - GENERAL

SECTION A - IDENTIFICATION

1. A/C ACCIDENT BOARD APPOINTED BY: Commanding Officer, LTPHOTORON SIX THREE
2. DATE OF ACCIDENT: 27 March 63 — TIME (LZT): 1015U
3. SERIAL NUMBER: 3-63
4. Commander, U. S. Naval Aviation Safety Center
5. ENCLOSURES: (1)
6. VIA: (1) Commanding Officer, LTPHOTORON 63
(2) COMMANDER FLEET AIR SAN DIEGO
(3) COMMANDER NAVAL AIR FORCE U.S. PACIFIC
(4)
(5)
(6)
(LAST) Commander, U. S. Naval Aviation Safety Center
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
SEE PAGE FOUR ENCLOSURES
7. REPORTING CUSTODIAN (if different than item 1. above)
8. ACTIVITY OPERATING A/C (if different than item 7.): LTPHOTORON SIXTY THREE DET. DELTA
9. KIND OF FLIGHT: PHOTO/INST
10. TIME OF DAY: ☐ DAWN ☒ DAY ☐ DUSK ☐ NIGHT
11. LOCATION OF ACCIDENT: 33-22N 116-4W 025//1 MIRAMAR TACAN
12. ELEVATION ABOVE SEA LEVEL: 5500'
13. PLACE OF LAST TAKE-OFF: U.S. NAVAL AIR STATION MIRAMAR
14. CLEARED: FROM NAS MIRAMAR TO NAS MIRAMAR
15. TYPE CLEARANCE: ☐ IFR ☒ VFR ☐ DVFR ☒ LOCAL ☐ OPERATIONAL ☐ AIRWAYS ☐ DIRECT ☐ OTHER (Specify)
16. TIME IN FLIGHT: 1hr 45min
17. TYPE ACCIDENT: B5 COLLISION GROUND UNDETERMINED
18. PHASE OF FLIGHT: 4-IN FLIGHT

A/C

19. MODEL: RF-8A
20. SERIAL NO.: 146877
21. DAMAGE TO A/C: ☒ A ☐ B ☐ C ☐ D ☐ E ☐ F
22. DOLLAR COST: $1,000,000 UNDETERMINED
23. AIRSPEED (Kts.)
24. A/C WEIGHT: 20,000LB
25. LIST MODEL, SER NO, REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (Complete on OPNAV FORM 3750-1 for each A/C involved)

SECTION B - PERSONNEL DATA

1. NAME (Last, first and middle initials)	2. NAVIG. DATE	3. FILE SER. NO.	4. CLASS. RATING	5. DESIGN. SERVICE	6. AGE	7. TYPE DIV. APP. DIA.	8. BILLET	9. POSITION	10. INJURY CODE
PILOT (as controls at time of accident) PHILLIPS, ROBERT P.	LTJG	(b) (6)	1315	USNR	26½	1.5 MON	PILOT	COCKPIT	A2
CO-PILOT									

A2 Key Personnel

PERSONNEL		8. OFT - OPERATIONAL FLIGHT TRAINER AVAILABLE	USED	9. CPT - COCKPIT PROC. TRAINER AVAILABLE	USED	10. UNIT TO WHICH PERSONNEL ARE ATTACHED	11. TYPE INSTRUMENT CARD
PILOT	YES	X	X	X	X	VFP-63	☒ STANDARD ☐ SPECIAL
	NO						
CO-PILOT	YES						☐ STANDARD ☐ SPECIAL
	NO						

PILOT EXPERIENCE IN HOURS

12.

ITEM		PILOT	CO-PILOT
ALL MODELS		613.2	3.8
ALL MODELS IN LAST 12 MONTHS		279.8	3.8
ALL MODELS IN LAST 3 MONTHS		80.7	
ALL SERIES THIS MODEL (Item 19)	A/C	262.6	
	OFT / CPT	19-2	
ALL SERIES THIS MODEL LAST 12 MONTHS	A/C	262.6	
	OFT / CPT	19-2	
ALL SERIES THIS MODEL LAST 3 MONTHS	A/C	80.7	
	OFT / CPT	2-1	

ITEM	PILOT	CO-PILOT
CV LANDINGS DAY/NIGHT	41/6	
FCLP LANDINGS DAY/NIGHT	361/76	
INSTRUMENT HOURS LAST 3 MONTHS	4.8	
NIGHT HOURS LAST 3 MONTHS	17.8	
TOTAL HELO. HRS (Helo. AAR Only)		
TOTAL JET HOURS (Jet AAR Only)	562.6	
LAST FLIGHT, ALL SERIES THIS MODEL — DATE	3-26-63	
DURATION	2.0	

OTHER PERSONNEL

13.

NAME (Last, first and middle initials)	DNA	RANK DATE	FILE/SERVICE NO.	ORG. TO WHICH ATTACHED	INJURY CODE	BILLET	POSITION
1.							
2.							
3.							
4.							
5.							

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PAGE 2

C. WEATHER

1. CEILING	2. VISIBILITY	3. WIND DIRECTION & VELOCITY	4. TEMPERATURE OUTSIDE AIR	RUNWAY	5. DEW POINT	6. ALTIMETER SETTING
NONE	15 -	SW, 5 kts	70	NA	35	NA

7. OTHER WEATHER CONDITIONS (winds aloft, icing levels, sea state, etc., if pertinent to accident)

NO WEATHER REPORT AVAILABLE FROM CRASH AREA. ABOVE DATA DRAWN FROM THREE SURROUNDING STATIONS.

D. CONTRIBUTING FACTORS

✓	FACTOR	✓	FACTOR	✓	FACTOR
	PILOT		LANDING SIGNAL OFFICER		MATERIAL FAILURE OR MALFUNCTION
	CREW		OTHER PERSONNEL (Specify)		DESIGN
	SUPERVISORY PERSONNEL		ADMINISTRATIVE		ROLLING AND PITCHING DECK/ ROUGH SEAS
	MAINTENANCE PERSONNEL		AIRPORT OR CARRIER FACILITIES	X	UNDETERMINED
	SERVICING PERSONNEL		WEATHER		OTHER (Specify)

E. DEPLOYMENT

FOR ACCIDENTS ABOARD DEPLOYED CARRIER (Complete following Section on Pilot)

1. DATE DEPLOYED	2. DAY - HOURS/LANDINGS LOGGED SINCE DEPLOYED	3. DAY - HOURS/LANDINGS LOGGED LAST 30 DAYS
NA		
4. INSTRUMENT HRS LOGGED SINCE DEPLOYMENT	**5. NIGHT - HOURS/LANDINGS LOGGED SINCE DEPLOYED**	**6. NIGHT - HOURS/LANDINGS LOGGED LAST 30 DAYS**

PART II - MAINTENANCE, MATERIAL AND FACILITIES DATA

A. AIRCRAFT AND ENGINE DATA

1. A/C HISTORY

DATE OF MANUFACTURE	SERVICE TOUR	MONTHS IN THIS TOUR	TOTAL NO. OF OVERHAULS	FLIGHT HRS SINCE LAST OVERHAUL	FLIGHT HRS SINCE ACCEPTANCE	TYPE CHECK LAST PERFORMED	FLIGHT HOURS SINCE LAST CHECK	NO. OF DAY SINCE LAST CHECK
9 DEC 1959	3rd	ONE	TWO	27.5	825.0	1st INTER	6.4	4

2. ENGINE HISTORY

		ENGINE MODEL	ENGINE SERIAL NO.					
1	NA							
2								
3								
4								

3. GENERAL

a. DID FIRE OCCUR? ☐ BEFORE ACCIDENT ☒ AFTER ACCIDENT ☐ DID NOT OCCUR

b. DID EXPLOSION OCCUR IN FLIGHT? ☐ YES ☒ NO

c. CHECK IF APPLICABLE ☐ AMP FOR SERIAL

d. HAS DIR BEEN REQUESTED? ☒ YES ☐ NO

e. FAILED COMPONENTS INVOLVED: SEE PAGE FOUR

B. HUMAN ENGINEERING

CHECK ITEMS PRESENT IN THIS ACCIDENT

a. ☐ A/C DESIGN
b. ☐ A/C EQUIPMENT
c. ☐ MAINTENANCE
d. ☒ UNDETERMINED
e. ☐ TECHNICAL INSTRUCTION
f. ☐ OTHER (Specify) ----------
g. ☐ SURFACE FACILITIES
h. ☐ HUMAN ENGINEERING (e.g., Cockpit configurations, etc.)

C. OTHER DATA

a. ALTITUDE AT MALFUNCTION	b. AIR SPEED	c. OPERATING TEMP.	d. WEIGHT OF A/C	e. C.G. (% MAC)	f. KIND OF FUEL	g. FUEL PRESSURE
	Kts.		28,000 lbs	NA	JP-4	

h. EVIDENCE OF FUEL CONTAMINATION

i. CAUSE OF ENGINE FAILURE OR FLAME OUT

j. FUEL CONTROL REGULATOR/~~[illegible]~~ (List Stock and Ser. nos., give time since new or overhauled): R2915-658-8298-NHSC, Ser. 19659 173.7 hrs since ovhl.

k. EXTERNAL STORES ABOARD A/C: NONE

(If additional space is necessary, attach additional sheets)

8

AIRCRAFT ACCIDENT REPORT

PART II — MAINTENANCE, MATERIAL AND FACILITIES DATA (Cont'd)

1. GENERAL ✓ BASIC FACILITIES INVOLVED. DESCRIBE EFFECT ON ACCIDENT IN THE ANALYSIS SECTION OF THE REPORT

	a. CLEARANCE AUTHORITY		i. WATER LANDING AREA		q. CRASH AND RESCUE
	b. FLIGHT PLANNING INFORMATION SOURCE		j. APPROACH ZONE		r. SEARCH AND RESCUE
	c. LANDING AIDS (GCA, CCA, ILS, etc.)		k. END ZONE (Over run)		s. CATAPULT
	d. TRAFFIC CONTROL TOWER (Field or Ship)		l. SHOULDERS		t. ARRESTING GEAR (Carrier)
	e. APPROACH AND ENROUTE AIDS TO NAVIGATION		m. TAXIWAY		u. BARRIER OR BARRICADE (Field or Ship)
	f. RUNWAY WATCH		n. PARKING AREA		v. FLIGHT DECK
	g. LANDING SIGNAL OFFICER		o. EMERGENCY ARRESTING GEAR (Runway)		w. MIRROR
	h. RUNWAY		p. A/C SERVICING, HANDLING AND DIRECTING (Field or Ship)		x. OTHER (Specify)

SECTION B — FACILITIES DATA

a. EQUIPMENT INVOLVED: ☐ CATAPULT ☐ ARRESTING GEAR | b. PRESSURE SETTINGS | c. WIND OVER DECK | d. RELATIVE HEADWIND | e. APPROACH SPEED (SPN - 12 READING)

f. MARK NUMBER | g. MODEL NUMBER | h. LOCATION ON SHIP | i. LAUNCHING BRIDLE AND CONFIGURATION USED

j. CATAPULT / ARRESTING GEAR BULLETINS OR NOMOGRAMS USED

k. THIS PORTION SHALL BE COMPLETED WHENEVER (1) A MAJOR AIRCRAFT ACCIDENT INVOLVES ARRESTING GEAR, BARRIER AND/OR BARRICADE EQUIPMENT OR (2) AN AIRCRAFT ACCIDENT INVOLVES MALFUNCTIONING OF ARRESTING GEAR, BARRIER AND/OR BARRICADE EQUIPMENT. MINOR ACCIDENTS OR ROUTINE DAMAGE TO CABLES, WELDINGS AND OTHER EXPENDABLE COMPONENTS NEED NOT BE REPORTED.

2. SPECIFIC DATA

ENGAGED	DECK RUNOUT (FT.)	RAM TRAVEL (IN.)	CONTROL VALVE SETTINGS: CONSTANT PRESSURE: DOME (PSI.)	CONSTANT PRESSURE: RATIO	CONSTANT RUN-OUT (WT. LBS.)	ACCUMULATOR PRESSURE (PSI)	COMMENTS (for cable failure specify number of landings and months in service)
DECK PENDANT							
DECK PENDANT							
BARRIER							
BARRIER							
BARRICADE							

PART	SECTION	ITEM	PART III REMARKS (Continue on additional sheets)
III	DIST		VF-124/VF-191/VF-91/VF-111/VF-141/VF-154/VF-162 VF-211/VF-174/VF-24/VF-51/VFP-63 DETS BRAVO, FOXTROT, MIKE, DELTA
I	A	8	COMFAIRSDIEGO/COMNABS 11 MSG. 281754Z OF MARCH 1963 ASSIGNED ACCIDENT INVESTIGATION AND REPORTING TO LTPHOTORON SIXTY THREE

COPY DISTRIBUTION
2CC. NAVAIRSAFECEN DIRECT
1CC. BUMEPS DIRECT
COMNAVAIRPAC
CINCPACFLT
COMFAIRSDIEGO
BUMEPS REP DALLAS
VFP-63
VFP-62
COMCVG-15
CO USS CORAL SEA
BUWEPS-ST REP REPAIR

COST DAMAGE: | GOVERNMENT PROPERTY | PRIVATE PROPERTY | DATE SUBMITTED TO C.O.

(b) (6) [redacted]

SENIOR | UNIT BILLET
FLIGHT | UNIT BILLET

PART I, SECTION A, ITEM 5

LIST OF ENCLOSURES

(1) NOR. (original only)
(2) Statement of LT. (b) (6) [redacted] (Flight leader)
(3) Sketch of Immediate Impact Area
(4) Sketch of Crash Site, indicating wreckage distribution
(5) Squadron Flight Schedule for 27 March 1963
(6) Resume of Aircraft Service Change and Engine Bulletins not incorporated, RF-8A BUNO 146877
(7) Statement of LT (b) (6) [redacted] (squadron Assistant Maintenance Officer) and a resume of aircraft discrepancies and corective action taken, 6-26 March 1963, RF-8A BUNO 146877
(8) Aerial Photograph of Crash Area
(9) Aerial Photograph of Impact Area
(10) Photograph of Aircraft Engine
(11) Resume of Pilot's total Flying Experience

PART II, SECTION A, ITEM 3e

COMPONENTS SUBMITTED FOR DIR

(1) LH Outboard Panel Droop Cylinder	88291
LH Outboard Center Section Droop Cylinder	CV15-901077-001
LH Inboard Center Section Droop Cylinder	CV15-901076-001
RH Inboard Center Section Droop Cylinder	CV15-901076-002
RH Outboard Center Section Droop Cylinder	CV15-901077-002
RH Outboard Panel Droop Cylinder	13002
(2) RH UHT Cylinder	CV15-601051-014
(3) LH Aileron Cylinder	CV15-908068-031
(4) Rudder Cylinder	CV15-158087-006
(5) J57 P & W P4A Engine	627565
(6) One Section of Fuselage Skin	

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D

10

PART V THE ACCIDENT

At 0830U on 27 March 1963, LTJG. R. P. PHILLIPS, (b) (6) [redacted] U. S. Naval Reserve, launched from NAS Miramar in RF-8A BUNO 146877, Modex Corktip 911, for a two hour Photo/Instrument flight. LTJG PHILLIPS was scheduled with LT. (b) (6) [redacted] the flight leader who briefed for section afterburner takeoff, climb to 10,000 feet where the two aircraft would separate to accomplish individual photographic missions. Upon completion of the photo, the two aircraft were to rendezvous for a practice section Tacan penetration to NAS Miramar.

The preflight, start, taxi, climb, photo missions, section penetrations, and VFR departure were normal in all respects.

Following the VFR departure after the penetration, the flight climbed to 20,000 feet where two formation (cruise) wingover maneuvers were performed. Upon completion of the second wingover, at an altitude of 15-18,000 feet the lead aircraft, LT (b) [redacted] continued the nose low attitude and commenced a descending left spiral on an initial heading of North at an estimated speed of 400 to 425 knots while pulling 2-3 "g's". Shortly thereafter the leader reduced power to idle and extended partial speed brakes. LT (b) (6) [redacted] leveled off at 8000 feet indicated continuing a 2-3 "g's" level turn. At this time, LT (b) [redacted] noticed LTJG PHILLIPS was no longer in formation. The last time LT (b) [redacted] saw Corktip 911 was just prior to commencing the descending spiral.

When he did not receive any response to radio calls, LT (b) [redacted] made a 180 degree turn and noticed a small amount of black smoke. He investigated the smoke, reported the possibility of a crash over the radio, then, after examining the smoke, noted a blackened crater 025 degrees, 41.2 nautical miles from the Miramar Tacan (in the Cleveland National Forest).

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D

11

PART VI DAMAGE TO THE AIRCRAFT

RF-8A BUNO 146877 suffered ALFA damage when it crashed into the ground at 33-22 North, 116-40 West (025 degrees, 41.2 nautical miles, NAS Miramar Tacan). The aircraft struck a hillside at an impact angle of 75-90 degrees (40-45 degrees from the horizontal). The aircraft was completely demolished due to the initial impact force and the resulting explosion.

No portion of the aircraft or the engine was salvagable, however; the following components were recovered and sent to the Overhaul and Repair Department, North Island, for DIR:

a. six wing leading edge droop cylinders;

b. one aileron package;

c. one UHT package;

d. one section of fuselage skin aft of the main speed brake, adjacent to the main fuel cell;

e. one rudder package;

f. one engine with afterburner

The aircraft struck the ground once, leaving an ellipsoidal crater 19 by 22 feet laterally and six feet deep, Enclosure (9). Two wing indentations 15 feet (starboard) and 23 feet (port) with a depth of 1 foot, were also formed. The engine traveled 600 feet through the air from the point of initial impact, then bounced down a steep hill, coming to rest 600 feet from the initial impact area. The engine was severely damaged by the impact force and the attendant explosion.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D.

PART VII THE INVESTIGATION

A. Upon notification of the crash, the Accident Board proceeded to the scene by helicopter and commenced the initial phase of the investigation to determine:

1. If the pilot survived.

2. If there had been an ejection attempt.

3. If there were any local witnesses to the flight or accident.

4. If there was any evidence available indicating a causal factor.

Numerous additional trips to the crash site were made to:

1. Recover any aircraft parts, pieces, or components that might aid in the determination of a cause factor.

2. Determine the degree of aircraft destruction and wreckage distribution.

Concurrently, the Accident Board conducted investigations in the following areas:

1. Requests to local agencies in an attempt to acquire witnesses.

2. Delivery of recovered parts and components to the Overhaul and Repair Department, North Island for DIR, and lengthy discussions with cognizant engineers.

3. Review of Pilot's flight and medical history.

4. Review of past aircraft discrepancies and maintenance records.

5. Possible material failures or malfunctions from recovered parts.

6. Interview with the flight leader.

7. Simulated flight conditions that could have caused or resulted in the accident.

B. 1. The pilot did not survive. An immediate search of the area surrounding the impact site did not disclose any portion of the aircraft canopy or ejection seat.

2. A group of Forest Service Personnel at the scene of the crash extinguishing brush fires caused by small pieces of burning aircraft wreckage, were interviewed. They reported that they had been working in the canyon over the ridge from the crash site (approximately 3 miles distant) and that they neither heard nor saw any aircraft. The first indication they had of a crash was when one of the individuals noticed a rapidly rising plume of black smoke.

3. There were no causal factors immediately evident to the members of the Accident Board.

4. On numerous occasions, the Accident Board, a representive of the Naval Avintion Safety Center, and squadron maintenance personnel searched the area for portions or components of the aircraft that would indicate any casual factor. The following is a list of identifiable components recovered that merited DIR:

a. Six wing leading edge droop cylinders;

b. one aileron package;

c. one UHT package;

d. one section of fuselage;

e. one rudder package;

f. one engine.

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The searches disclosed no other component or part that was in a condition to permit analysis. Of particular interest to the Accident Board were the missing aileron package and UHT package. However, all search attempts to recover these parts were fruitless.

One port and one starboard wing lock was recovered. Each had the locking pin in place, joining a portion of the outer panel to the wing.

Minute portions of the ejection seat were also recovered.

Enclosures (3) and (4) indicate the recognizable parts of the aircraft viewed by the search parties and their distribution.

5. A 3/8" combination wrench, with squadron markings, was found close to the impact site. When discovered, the wrench was twisted, and had numerous scratches and indentations that could have resulted from contact with or binding in control surfaces. Therefore, this tool was also delivered for DIR. The examiner at O & R, after numerous tests stated that:

a. The metal hardness of the wrench was such that he felt that an extremely heavy blow or force would be required to make indentations on it;

b. The metals used in the control linkages of the F8 aircraft were to soft to make an impression on the wrench;

c. That the scratchings and indentations were made by a blow rather than a rubbing force;

d. He believed that the wrench had not received indentations as a result of contact with moving parts of the aircraft.

6. The Accident Board determined that the aircraft struck the ground nose first, upright, with the starboard wing impacting slightly prior to the port wing. The impact angle of 75-90 degrees (40 degrees from the horizontal) was determined from broken trees. The immediate impact area, Enclosure (3), indicated that the aircraft heading at the time of impact was 065 degrees. The wreckage distribution diagram, Enclosure (4), indicates that although the aircraft contacted the ground on a heading of 065 degrees, the resultant vector of aircraft motion was more northerly.

The force of impact and resulting explosions caused a crater six feet deep and 19 feet by 23 feet across. The aircraft wings made craters 15 feet (Starboard) and 23 feet (port) in length with the depth of 1 foot., Enclosure (3). The force of the explosion was intensified by containment of the explosion by the ground pocket, due to rising terrain on three sides and the low fuel state of approximately 2000 pounds resulting in a near ideal fuel-air mixture. It was noted that there was but little evidence of burning, either on the ground or on the portions of the aircraft recovered. The aircraft was totally destroyed by an extremely high order explosion. The largest fragment recovered, with the exception of the engine, was a damaged section of fuselage skin and UHT approximately 8 feet long and 2 feet wide. The vast majority of pieces viewed were only inches in size. All control packages, actuating rods and engine accessories were severely damaged or demolished. The investigator from the Safety Center stated that he had never participated in an aircraft accident investigation where the destruction was so complete and the aircraft so demolished. The engine ricocheted through the air from the initial impact point approximately 600 feet in a northerly direction. After it struck the ground, it bounced down a steep hill 5 times, coming to rest approximately 600 feet in a westerly direction from the crater. The first eleven compressor stages, numerous turbine blades, and most engine accessories were missing from the engine; the overall length engine from the twelfth compressor stage to the afterburner eyelids was approximately 6 feet, Enclosure (10).

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7. Enclosures(3) and (4) depict the wreckage diagrams as noted by the Accident Board. Headings and distances are approximate due to the nature of the terrain. However, the diagrams are accurate in that they display the general pattern of debris. The area around the impact site was searched on all headings out to 2000 feet. The few pieces that were found south of the crater, were all of very small size, close in. None were found in the easterly direction. On the day after the accident, the Riverside County Sheriff Department was requested to contact persons living in the small towns overflown by corktip 915 and 911 just prior to the accident to determine if any one had seen any aircraft, low flying or in apparent trouble. On the same day the Forest Service Bureau was requested to further question personnel working in the area adjacent to the crash to determine if there were any witnesses.

Both agencies reported negative answers to all queries.

8. O and R, North Island, reported the following on parts delivered to them for DIR:

a. All droop cylinders indicated that the cruise droops were in the restracted or clean position.

b. The left aileron piston indicated that the left aileron was in the up position (left bank).

c The UHT was in neutral or midpoint position at impact. Some question as to whether the broken end fitting had failed prior to impact.

d. Rudder package was in neutral position.

e. The fuselage section indicated that there was no inflight fire prior to crash

f. DIR on engine not complete at time of submission of this report. Pertinent, amplifying information will be disseminated in an supplementary report.

The engineer that conducted the investigation was not available for further comment prior to submission of this report, nor was his final engineering report completed. Upon his return, if further amplifying conclusive information is developed, it will be disseminated in a supplementary report.

9. LTJG PHILLIPS was a first tour pilot with a total of 613 hours, of which 262 hours were in the F8 series. He was considered a outstanding young aviator. Squadron pilots made special reference to his superior ability as a wingman.

(b) (6)

[redacted]

(b) (5)

[redacted]

Further, on 26 March 1963, one day before the accident, LTJG PHILLIPS received a pressure suit check-out at NAS North Island. Included in the check-out was a rapid descent from 35,000 feet in the Low Pressure Chamber. The attending flight surgeon reported to the Accident Board that no one in the chamber reported any difficulty, or discomfort of any kind on the subject run.

A resume of LTJG PHILLIPS total flying experience is included in Enclosure (11).

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10. All aircraft discrepancies and the corrective action taken for the period 6-26 March 1963 are listed in Enclosure (7).

11. Enclosure (6) contains a list of all outstanding Aircraft Service Changes and J57 Engine Bulletins.

12. The Martin Baker Ejection Unit installed in BUNO 146877 was last inspected on 19 March 1963. The parachute was last packed on 24 February 1963 and installed in the seat on 26 February 1963.

13. All parts recovered were severely damaged. The Accident Board, assisted by squadron maintenance personnel, identified and examined each recovered part to determine if failure or malfunction had occurred. The possibility that flight control, ejection seat or engine failure had occurred was extensively investigated. Where possible, components from these systems were submitted for DIR.

The following facts were determined in the investigation:

a. Ejection Seat. Portions of the seat gun rail and the secondary initiator cartridge were recovered. The seat gun rail was damaged in a manner that indicated the seat had moved forward, tearing the rail at the bottom, rather than upward. The secondary initiator cartridge indicated no traces of firing. Evidence of seat malfunction or failure could not be determined from the parts recovered.

b. Wing Outer Panels. These were still attached to the aircraft wing at impact. (PART VII, Para. 3).

c. Engine. Due to difficulties encountered in the recovery and disassembly of the aircraft engine, the DIR report was not completed prior to the submission of this report.

d. Control Linkage. DIR reported that none of the recovered control packages were in full extended position at impact. This would have been the case if failure had occurred in the control linkage or package itself.

(b) (5)

[redacted]

Further information on this subject, if pertinent, will be included in a supplementary report.

Due to the highly damaged condition of all other parts and components, no determination of failure or malfunction could be made.

BUNO 146877, Corktip 911, was in all respects ready for flight on 27 March 1963, Enclosure (7).

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D

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14. The flight prior to the maneuver resulting in the accident was normal in all respects. (PART V and Enclosure (2). At no time did LTJG PHILLIPS report any discrepancies or problems to the flight leader. His reaction and flying ability at no time appeared impaired in any way.

After completing the VFR Section Tacan approach to NAS Miramar, the flight proceeded in section to the vicinity of Warner Springs, California at an altitude of approximately 20,000 feet. The flight leader, in Corktip 915, commenced two wingovers at approximately 95% RPM. LT (b) [redacted] estimated that he had 2000 pounds of fuel at this time. A fuel check just after the Tacan approach gave Corktip 911 200 pound less than the lead aircraft.

Upon completion of the second wingover, after viewing LTJG PHILLIPS, Corktip 911, in cruise position, the flight leader kept the nose down and commenced a left spiral at approximately 15-18,000 feet. The path followed by the flight leader is included in Enclosure (2). At no time after commencing the spiral did the flight leader view Corktip 911. Also, he did not receive any response to his radio calls for idle power and speed brakes. (This is considered normal as wingmen do not ordinarily "roger" for such transmissions.)

LT. (b) [redacted] was interviewed several days after the accident and the following points were clarified.

a. LT. (b) [redacted] stated that at the time of level-off (8000 feet), the aircraft heading was North to Northeast.

b. At level-off, the lead aircraft was in the approximate crash area.

c. The level-off was accomplished approximately 2000 feet above ground.

d. The airspeed of the lead aircraft after level-off was approximately 300 knots.

15. The Senior Member of the Accident Board and another squadron pilot attempted to duplicate the flight maneuver described by LT. (b) [redacted] Several spiraling descents were made following as closely as possible the configuration and actions of LT. (b) (6) If a 30 degree spiral is entered at 400-425 knots IAS, 18,000 feet, idle power, brakes out, a 540 degree, 2-3 "g" turn and level off at 8000 feet is easily accomplished since the airspeed decreases and the rate of descent is moderate.

The maneuver was performed with the cruise droop extended and retracted. It was noted that during a 3 "g" rolling pull out, the airspeed dissipated at a rate of approximately 40 knots per second with power off and speed brakes extended. Further, onset buffet was reached 0.5 "g" sooner with cruise droop retracted than with it extended.

The maneuver as performed is not dangerous, however airspeed bleed-off during pull out with a steady load factor applied could rapidly develop into a stall. These characteristics are discussed in detail in the Flight Handbook, NAVWEPS 01-45HHB-501, pages 6-1 through 6-8.

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VIII. THE ANALYSIS

Due to the lack of concrete evidence in any particular area, the Board can only theorize in the analysis.

a. PERSONNEL FACTORS

1. There is no indication that LTJG PHILLIPS suffered any physical impairment or incapacity prior to the crash. His performance during the flight proceeding the accident was normal in all respects.

(b) (5), (b) (6) [redacted] (b) (5), (b) (6) [redacted] On the day prior to the crash, LTJG PHILLIPS had attended pressure suit training during the course of which he had been subjected to a rapid descent from a simulated 70,000 feet (35,000 feet pressure altitude). The attending flight surgeon reported that none of the trainees had complained of any discomfort whatever during the descent.

3. LTJG PHILLIPS was an outstanding aviator. He had progressed through all phases of his training most successfully. Instructors and pilots assigned with him were high in praise of his ability, motivation and mental attitude.

4. LTJG PHILLIPS at no time during the flight reported any discrepancies in his aircraft.

(b) (5) [redacted]

6. The flight maneuver performed by the flight leader, LT (b) [redacted] was in no way dangerous or contrary to any regulations. It provided sufficient altitude for safe completion.

(b) (5) [redacted] (b) (5) [redacted] With an estimated level-off airspeed of 300 knots, Corktip 911, with an estimated 2000 pounds of fuel, would approach the stall boundary at approximately 270 knots if 4 "G" were applied.

8. The lack of eyewitnesses to the maneuver and crash precludes any determination about the maneuvers, flight attitude and aircraft configuration of Corktip 911. The report of the forest service personnel that they did not hear any aircraft would indicate that the flight was at a low engine power setting during the descent.

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(b) SUPERVISORY FACTORS

(1) There were no supervisory factors. LTJG PHILLIPS' experience, training, and ability was considered adequate.

(2) BUNO 146877, Corktip 911, was in all respects ready for flight. There were no discrepancies reported prior to or during the flight.

(3) A 3/8" combination wrench was found among the wreckage. As there were scratches and indentations impressed upon its surface, the wrench was submitted for DIR. The inspecting engineer concluded that these marks were not caused by a binding or rubbing force. Further, the hardness of the metal indicated that an extremely heavy blow was required to make these marks.

(c) MATERIAL FAILURE OR MALFUNCTION

(1) There was no evidence of material failure or malfunction.

(b) (5)

[redacted]

(3) It is known that the outer panels of the wing were in place at the time of impact. One locking mechanism from each wing was found with the pin joining a portion of the outer panel to the wing.

(4) From the parts recoverd, it could not be determined that the ejection seat had failed. A bottom portion of the ejection gun rail showed that the seat had moved forward at the time of impact, rather than upward.

(d) FACILITIES

Facilities were not a factor in this accident.

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PART IX COMMENTS

It is concluded that:

1. The flight leader performed no maneuver that could be considered dangerous or unauthorized.

2. There was no violation of the F8 NATOPS.

3. There was no evidence of material failure or malfunction.

4. Although some form of physically incapacitating attack cannot be completely ruled out, it is not thought to be probable in this accident.

5. The cause of this accident is undetermined.

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PART X RECOMMENDATIONS

1. Because of the lack of an eyewitness to this accident, nothing definite can be stated about the flight maneuver performed by the wingman from the commencement of the spiralling descent to the crash.

It is recommended that when an aircraft accident occurs in a remote area, the news media be utilized to obtain possible eyewitnesses.

2. No changes to the F8 NATOPS are recommended as a result of this accident.

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STATEMENT OF LT (b) (6) [redacted] USNR, CONCERNING VFP-63 AAR 3-63 RF-8A BUNO 146877, CORKTIP 911 OCCURRING 27 MARCH 1963, PILOT PHILLIPS

After a thorough examination of all maintenance records, aircraft log books, and the last yellow sheet there is no indication that RF-8A BUNO 146877 was not in all respects ready for flight on 27 March 1963.

Appended is a resume of all aircraft discrepancies and corrective action taken for the period 6-26 March 1963 on RF-8A BUNO 146877.

(b) (6) [redacted]

LT USNR

This witness is considered credible.
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ENCLOSURE (7)

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U. S. NAVAL AVIATION SAFETY CENTER
U. S. NAVAL AIR STATION
NORFOLK 11, VIRGINIA

NASC:64:hn
11 June 1963

MEMORANDUM

From: LCDR (b) (6) [redacted] USN
To: Commander, U. S. Naval Aviation Safety Center
Via: (1) Head, Accident Investigation Department RSH
(2) Chief of Staff

Subj: NASC Investigation 47-63 concerning RF-8A (F8U-1P) BUNO 146877 accident which occurred on 27 March 1963 near NAS, Miramar, California

1. RF-8A (F8U-1P) BUNO 146877, piloted by LTJG Robert P. PHILLIPS, (b) (6) [redacted] USNR, crashed at approximately 1015U on 27 March 1963, 41 miles northeast of NAS, Miramar, California in the Cleveland National Forest.

2. The investigation revealed the following:

a. LTJG PHILLIPS, attached to VFP-63, was scheduled to fly a two hour photo/instrument mission with LT (b) (6) [redacted] the latter flying as section leader. The flight was briefed for an afterburner section take-off with each aircraft proceeding on individual photo missions when reaching 10,000 feet. They rendezvoused at 0940U over NAS, Miramar at 18,000 feet and shortly thereafter commenced a VFR section penetration to Miramar. The approach was normal and a VFR departure and climb was made to 20,000 feet where two mild wingovers were executed at 95% RPM. Upon completion of the second wingover the section, maintaining a nose low attitude, entered a left descending spiral in cruise formation. Entry into the spiral was on a heading of north at 15-18,000 feet, 400-425 KIAS, pulling 2-3 "g's" in a 45-60 degree angle of bank. Within the first 90 degrees of turn the leader called "idle" over the radio, leaving slight throttle on himself. He then called "speed brakes" and partially dropped his brakes. Although there was no response it was not procedure to "roger" for such a transmission. At approximately 8,000 feet MSL (2,000 feet above the ground) the leader leveled off while still turning toward the south. 8,000 feet is the required altitude for entry into the Miramar approach corridor. Airspeed at level off was nearing 300 knots. After rolling his wings level the leader looked for his wingman, expecting him to join up in parade position. The wingman failed to appear and the leader, after calling on tactical frequency, reversed course to retrace his flight path. On the 025 degree radial from Miramar TACAN and at 41.2 miles the section leader saw a small amount of smoke and a crater but was unable to identify any wreckage. He then called Miramar tower and advised them of a crash at this site. The impact occurred in mountanous terrain at an altitude of 5500 feet. Ridges in this locale are 6,000 feet.

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b. The last transmission received during the flight was a radio fuel check made during the climb out following the penetration. (LT (b) (6) [redacted] state-2500 pounds; LTJG PHILLIP's state-2700 pounds) LT (b) (6) [redacted] last visual contact with his wingman was at the commencement of the spiral. At no time were any problems reported nor did LT (b) [redacted] suspicion any difficulties by his wingman.

(b) (6), (b) (5)

[redacted]

d. Weather conditions in the accident area indicated sky-high broken, visibility-15 plus, temperature-60 and light southwesterly winds.

e. Endeavors on the part of the sheriff's department and the Forest Service Bureau failed to uncover any possible witnesses. A group of Forest Service personnel working three miles distant failed to notice or hear any aircraft in the area.

f. LTJG PHILLIPS was designated a Naval Aviator on 13 December 1961. He had accumulated 613 total hours, 562.5 total jet hours and 262.4 hours in the RF-8A (F8U-1P). Although a first tour pilot he was considered an outstanding aviator by the command and could always be relied upon to "stay in there" when flying wing position.

g. LT (b) [redacted] had been a designated Naval Aviator for three years and had accumulated 1080 total hours, 625 of which were in the RF-8A (F8U-1P).

h. The aircraft had accumulated 825.0 hours since acceptance on 9 December 1959 and 29.1 hours since completing its second Progressive Aircraft Rework (PAR) on 19 February 1963. 6.4 hours had been flown since a first intermediate check was completed by VFP-63 DET. DELTA on 23 March 1963.

i. The engine was accepted on 25 November 1957 and had accumulated 1054.1 hours. 173.7 hours had accumulated since completion of the second overhaul on 30 November 1961.

3. Analysis of the wreckage indicated the following:

a. The aircraft struck the side of a mountain at an impact angle of 75-90 degrees (40 degrees from the horizontal) on a heading of 065 degrees. The engine traveled 600 feet through the air from the initial impact point in a northerly direction and sustained additional damage when it rolled another 600 feet down the side of the mountain. The wreckage distribution showed the outer perimeter to be approximately 2,000 feet. The largest

fragment recovered was an eight foot length of fuselage skin. All other pieces were no more than inches in size and showed signs of severe damage. Little evidence of fire was found either in the vicinity of the crater or in the parts recovered.

b. Dense underbrush, coupled with the severity of the impact/explosion, made recovery of the wreckage both extremely difficult and limited. One aileron and one UHT control package were never recovered nor were any control rods or linkages found. The wing fold lock mechanisms were located and had the pins in place. Analysis of all droop cylinders revealed that they were in the retracted position (flight leader had his cruise droops extended).

c. Although ejection did not take place it could not be determined if the pilot had attempted to initiate the ejection sequence. A small piece of seat gun rail was damaged in a manner indicating the seat had moved forward rather than upward and the secondary initiator cartridge indicated no traces of firing.

d. The flight leader's accelerometer read four "g's" upon landing at NAS, Miramar. This reading would have had to occur during either the spiral recovery or in the final landing.

e. The engine operated normally until the time of impact.

4. Conclusions:

a. The probable cause of this accident was a stall/spin at an altitude which precluded recovery.

(b) (5), (b) (6)

[redacted]

c. A combination of factors could have readily induced an accelerated stall while in a turning/pullout flight maneuver. With power at idle and speed brakes extended airspeed was approaching 300 KIAS and dissipating at the rate of approximately 40 knots per second. The flight leader had his cruise droops extended while LTJG PHILLIPS had his droops retracted (wingman would reach buffet and/or stall boundry prior to leader). The leader was performing a possible 4 "g" rolling pullout. The wingman, normally reaching higher "g" levels than the leader, would be exceeding this. Figures obtained from Ling-Temco-Vought indicated that with a 2,000 pound fuel load (20,000 gross) at 10,000 feet the aircraft would stall, clean droop condition, at

270 knots with 4 "g's" applied. A rapid approach to a stall in this model aircraft affords little warning and results in a more violent motion at the stall point with possible spin entry. The probability would also be present for the aircraft to have entered a snap roll maneuver during a low EAS subsonic rolling pullout brought about by adverse yaw and increasing "g" forces.

5. During the search a 3/8" combination wrench was found in the vicinity of the impact site. The twisted and marked appearance of the wrench caused speculation as to the role it might have played in the accident.

(b) (5)

[redacted]

6. Recommendations:

a. The Analysis and Research Department reiterate in Crossfeed the possible dangers involved when flying close formation in two differently configured aircraft - essentially the situation here with varied droop positions.

b. The Maintenance and Material Department emphasize in Crossfeed the necessity for maintenance personnel to thoroughly inventory tools both prior to and following any work performed on an aircraft. Varied tools are being found with increasing regularity in accidents investigated by the Safety Center. In addition to the potential hazard involved it is often difficult to determine whether a tool found in a wreckage was pertinent to the accident.

(b) (6)

[redacted]

(b) (6)

[redacted]

Copy to:
Chief of Staff
02
10 (2)
20 (2)
30
40 (2)
50

STATEMENT OF LT (b) (6) [redacted] (b) (6) [redacted] USN, CONCERNING VFP-63 AAR 3-63 RF-8A (BUNO) 146877, CORK TIP 911 OCCURRING 27 MARCH 1963, PILOT PHILLIPS

I was the pilot of CORKTIP 915 on the morning of 27 March 1963. LTJG PHILLIPS and I were scheduled for a two hour photo/instrument hop to take off at 0800U. We briefed for an afterburner section take off with me leading and to split up and proceed on individual photo hops after reaching 10,000'. LTJG PHILLIPS was assigned CORKTIP 911 and the hop went as briefed. We joined up over Miramar at 0940U as briefed and proceeded to Laguna for a practice VFR section approach. This went normally and we made a VFR departure from Miramar.

We climbed to approximately 20,000' and did two mild wingovers (45° bank, 15°-20° nose high and low) at about 95% power with CORKTIP 911 on my right wing.

Upon the completion of the second wingover at about 15-18,000' I kept the nose down and commenced a left spiral (initial heading was north) so as to approach Ramona at 8000' on a heading of 180°. At the start of the spiral I noticed the airspeed was around 400-425 knots. I called "idle" over the radio after 90° of turn. The speed did not seem to be dissipating, so I called "speed brakes" soon there after. I did not use full speed brakes so as to give CORKTIP 911 leeway in his power adjustments. At no time did I hear any response to my transmissions.

I leveled off after 540 degrees of turn at approximately 8000' as indicated on the pressure altimeter, still in a 2-3 "G" left turn. I rolled wings level heading for Mt Palomar and looked for CORKTIP 911 on my wing. He was not there but I continued on towards Palomar for 10-15 seconds expecting him to join up in parade position.

He did not appear so I called on tactical frequency. I received no response so I made a tight 180° turn and tried to retrace my flight path. I passed over a ridge on the 025° radial 41.2 nautical miles from Miramar tacan and saw a small amount of smoke and a blackened crater. I could not identify any wreckage whatsoever. At this time I called Miramar tower on 315.6 and told them of a possible crash at this site. I then immediately switched back to tactical frequency but could not get any response from CORKTIP 911. At this time I called Miramar tower on guard as to alert any-other aircraft in the area. They switched me to Miramar ground control, 380.8 and I remained on that frequency until I headed back for Miramar due to a low fuel state (1400#).

I made several passes over the area at 2-3000' above the ground and at no time saw a parachute or any wreckage. A small fire broke out about 50 yards east of the crater but there was no other evidence of fire.

I do not know what caused the accident. The airspeed when I rolled wings level was around 300 knots, but I did not look at any instruments during the descent, so the exact limits of speed, G's, or angle of bank were unknown but not considered excessive for a safe VFR descent with a wingman. At no time did I feel I was dangerously close to the ground or in any altitude and/or throttle setting that LTJG PHILLIPS could not handle.

I have been a Naval Aviator for three years and have 1080 hours, 625 of which are in the RF-8A.

(b) (6) [redacted]

LT USN

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ENCLOSURE (2)

EXPLANATION OF ENCLOSURE (3)

PART	LOCATION
Aileron Cylinder Bellcrank	J
Antenna,, ARC-27, portion of	F
Canopy, strut, piece	C
Camera, Magazine, portion of	E
Gear, Main Fuel Pump	C
Glass, Green, pieces	H
Helmet, Pilot's, portion of	D
Lock, Wing, Starboard	G
Tailhook Cylinder	B
Vertical Stabilizer, portion of	F
Wing, underside, 6 foot length	A

IN CRATER

Engine Turbine and Compressor Blades
Fuel Cells, portions of
Main Landing Gear, portions of
Main Landing Gear, Actuating Cylinder, portion of
Pumps, Hydraulic, 2 portions of
Tail Hook Point and 1 foot of Shaft
Tail Disconnect Break
Wing Incidence Fitting
Small pieces of Fuselage and Wing

WITHIN 50 FEET OF CRATER

Small fragments of Aircraft Skin (Fuselage, Wing, Tail Section)
Small fragments of fuel cells
Hydraulic fittings
Turbine and Compressor blades

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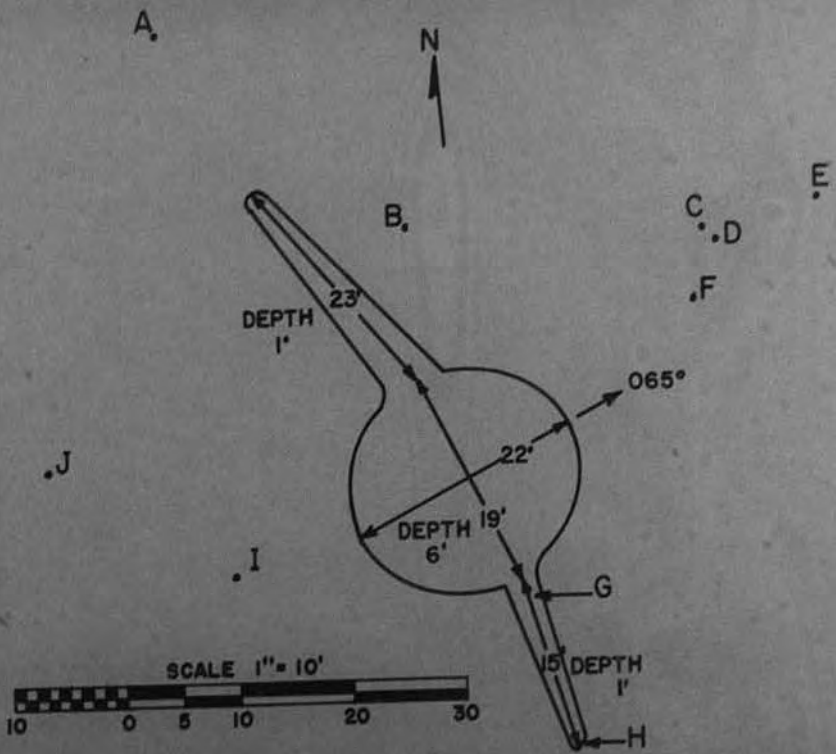

VFP-63 AAR 3-63, RF-8A BUNO 146877, CORKTIP 911, OCCURRING 27 MARCH 1963, PILOT PHILLIPS. WRECKAGE DIAGRAM OF IMMEDIATE IMPACT AREA.

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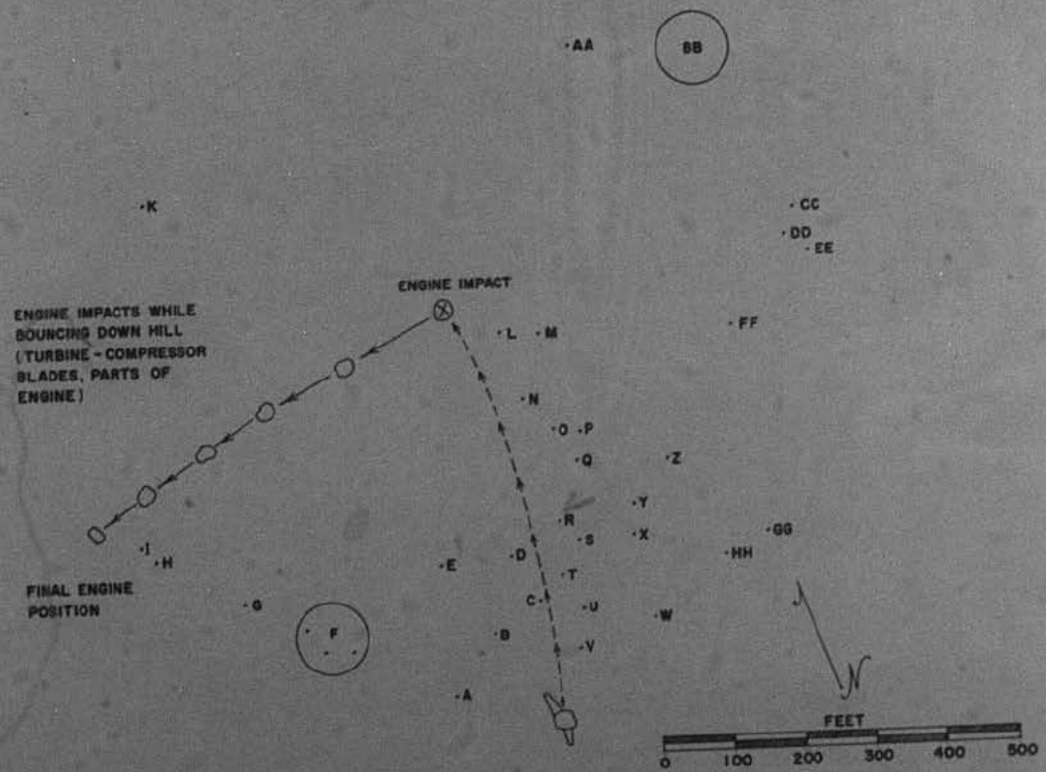
ENCLOSURE (3)

EXPANATION OF ENCLOSURE (4)

PART	LOCATION
Accessory Drive, part of	F, DD
Aileron, part of	Z
Bulkhead, Main, part of	M
Camera Door, 3" piece	X
Cartridge, CO2	S
Cockpit, part of	BB
Cockpit Glass, piece of	W
Cockpit Rail, part of	S
Drogue Chute	HH
Droop Cylinder	V
Engine Mount, starboard	GG
Engine Ring, nose section, bottom portion	K
Engine Turbine, part of	P
Fuel Pump, part of	F
Fuselage, burned part of	I
Fuselage, 8 Foot section, part of UHT attached	J
Flight Gear, small pieces of	S
Generator, part of	F
LOX Converter	II
Mae West, largest piece of	FF
Magnesium, piece of	T
Main Gear, Extension Rod	H
Nose Section, parts of	BB
Parachute, part of	HH
Seat Timer, part of	S
Seat Cover, part of	S
Seat, pieces of	S, W, X, AA, EE
Seat, Nomenclature Plate	U
Spoiler, part of	Y
Tail Section, part of	CC
Turbine, parts of 1st stage	X
Turbine Wheel	L
Trunnion, Nose Gear	G
UHT, part of	EE
UHT Cylinder, part of	Q
UHT Shaft Housing	A
Wing, parts of outer panel	N
Wing Lock	R
Wing, Starboard, part of	KK
Wing, Top, numerous parts of	JJ
Wing Actuating Cylinder	

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D



VFP-63 AAR 3-63, RF8A BUNO 146877, CORKTIP 911, OCCURRING 27 MARCH 1963, PILOT, PHILLIPS.
WRECKAGE DIAGRAM. SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D

ENCLOSURE (4)

LIGHT PHOTOGRAPHIC SQUADRON SIXTY THREE
U.S. NAVAL AIR STATION
MIRAMAR, LS, CALIFORNIA

VFP-63 3700
FRH:CRS:bp
26 MARCH 1963

From: Commanding Officer
To: Light Photographic Squadron SIXTY-THREE

Subj: The daily flight schedule for Wednesday 27 March 1963

1. Purpose. To publish the daily flight schedule

2. Schedule.

SUNSET: 1805

SDO: LT [redacted] /LT [redacted] /LT [redacted] ODO: LTJG [redacted] /LT [redacted] /LT [redacted]

EVENT VFP-63	PILOT	MODEX	STD	ETE	AFT	TYPE FLIGHT	REMARKS
1.	[redacted]		0730	2.0		PHOTO 11	
			0730	2.0		PHOTO 3	
			0730	2.0		PHOTO 16	
			0730	2.0		PHOTO 16	
2.	[redacted]		0800	2.0		PHOTO/INST DET DELTA	
	PHILLIPS		0800	2.0		PHOTO/INST DET DELTA	
3.	[redacted]		1100	2.0		PHOTO 1	
			1100	2.0		PHOTO 16	
			1100	2.0		SP PHOTO KA-40 + KA-46	
			1100	2.0		PHOTO 11	
4.	[redacted]		1130	2.0		PHOTO/INST DET DELTA	
			1130	2.9		PHOTO/INST DET DELTA	
5.	[redacted]		1430	.5		FLP-BLTAIP	
			1430	.5		FLP-BLTAIP	
			1430	.5		FLP-BLTAIP	
			1430	.5		FLP-BLTAIP	
6.	[redacted]		1530	.5		FLP	
			1530	.5		FLP	
			1530	.5		FLP	
			1530	.5		FLP	
7.	[redacted]		1800	[illegible]		NITE PHOTO	
8.	[redacted]		1930			NITE FLP-BLTAIP	
			1930			NITE FLP-BLTAIP	
			1930			NITE FLP-BLTAIP	
9.	[redacted]		2030			NITE FLP	
			2030			NITE FLP	
			2030			NITE FLP	

NOTES:
1. 0730 [illegible] [redacted] [illegible]
2. 0800 [illegible] [redacted]
3. 0900 [illegible]
4. EMERGENCY BRIEF " FUEL TRANSFER FAILURES"
5. [illegible] SCHOOL - 1300 - [illegible]
6. LT [redacted] RELIEVES LT [illegible] AS SDO DURING FLP
7. THE FOLLOWING PILOTS [illegible] SURVIVAL [illegible] FALLACY [illegible] [redacted] [illegible] [redacted] [illegible] [redacted] [illegible] [redacted]
8. [illegible] QUESTIONS:
   1. [illegible]
   2. [illegible] 40,000 FEET [illegible]
9. [illegible]
   1. [illegible]
   2. [illegible]

ENCLOSURE (5)

10. THE SDO IS RESPONSIBLE FOR FLIGHTS DEPARTING AND ARRIVING ON TIME. HE IS FURTHER RESPONSIBLE FOR ABSENTEES AT THE LINE AND OPT.

** **

I CERTIFY THAT ALL PILOTS WILL BE BRIEFED ON WEATHER AND OTHER PERTINENT INFO, HOLD VALID INST. CARDS, AND POSSESS ALL NECESSARY CHARTS AND MAPS.

TOTAL HOURS SCHEDULED. 28.9

3. Cancellation. This notice is canceled upon completion of published flights.

(b) (6) [redacted]

DISTRIBUTION
LIST IV

SIGNATURE OF CLEARING AUTHORITY
L. H. BAUER
Captain, U. S. Navy
Commanding Officer

CAUTION: SAN DIEGO DEPARTURE CONTROL DOES NOT GUARANTEE YOUR SEPARATION FROM UNCONTROLLED (VFR) TRAFFIC

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAVINST 3750.6D

ENCLOSURE (5)

RESUME OF AIRCRAFT SERVICE CHANGES and ENGINE BULLETINS NOT INCORPORATED, RF-8A BUNO 146877

P&W J57 ENGINE BULLETINS

369 Fuel Manifold Heat Shield Inspection of Repair
474 Diffuser Case Assy, Installation of Reinforcing Plates
550 Valve Assy. Fuel Pump Transfer, Modification of
556 Fuel Seals, Replace and Rework of Manifold Inlet Distributor and Fuel Manifold
558 #5 Bearing Seal Support and Seal Rings, Rework and Replacement of
584 Main Bearing Seal Spacer, Rework of
492A1 Tube Assy. Nozzle Control to A/B Fuel Control, Replacement of
278A Fuel Manifold Assy. Complete Information on Replacement
278B Fuel Manifold Assy. Complete Information on Replacement

AIRCRAFT SERVICE CHANGES

CODE A

383 U Electrical: Air Turbine Generator Shut-off Feature Overspeed Mechanism Exerciser; modification of
384 U Air Turbine Cavity Drain and Oil Baffle Plate
406 R Cockpit Lighting, Improvement of
418 R Flight Control, Aileron, Rudder, UHT Control Link, Locking of
331A U Instrument, Counting Accelerometer Group Installation of
411A U Landing Gear, Main Struts Corrosion Proofing of

CODE E

396 U Fuel System, Support Bracket Installation of
433 U Nose Gear Wheel Axle and Bearing Seals, Replacement of

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D

RESUME OF AIRCRAFT DISCREPANCIES AND CORRECTIVE ACTION TAKEN,
6-26 MARCH 1963, RF-8A BUNO 146877

DATE	DISCREPANCY	CORRECTIVE ACTION
6 MAR	Hydraulic Leak in PC #1 Accumulator Line	Replaced PC #1 Accumulator Line
8 MAR	Port Tire Change	Changed Tire
8 MAR	Hand Hold Light Has No Red Lense	Replaced Red Lense
8 MAR	Port Tire Blew On Landing	Changed Tire
9 MAR	Hooklight Stays On With Hook Down	Repaired Down Switch Bracket
9 MAR	Radio Altimeter Out	Replaced Blown 5Amp Fuse
9 MAR	No DME	Replaced Tacan
9 MAR	Same Pressurization Gripe in Auto Fluctuates	Replaced Cockpit Temp. Controller And Thermostat and Cockpit Temp Bypass Valve. Xed OK On Turn-Up
9 MAR	RT. Wing Lite Out	Replaced Wing Tip Bulb
12 MAR	Same Pressurization Fluctuates In Auto.	Replaced Cockpit Temp. Controller And Thermostat And Cockpit Temp By-Pass Valve Xed OK On Turn-Up
12 MAR	Tacan--40° Lock On	Replaced ARN-21
13 MAR	Hook Light On With Hook Down	Tightned Up Down Switch Check OK
13 MAR	Pressurization Cycles In Auto (About 3-5 Sec. Cycle) At Idle-Full Power In Manual Either To Cold Or To Hot	Replaced Cockpit Controller & Thermostat And Cockpit By-Pass Valve Xed OK On Turn.
13 MAR	Lox Indicator Fluctuates Badly About 1000 LBS. Erratic Fluctuation.	Repaired Broken Coax Lead To Converter And Sent Lox IND.To Fad And It Xed OK System X's OK.
13 MAR	DME Out Completly	Found Loose Plug On DME Indicator Tightned And CK's OK
22 MAR	Tacan Out- AZMUTH And DME	Replaced ARN 21B
22 MAR	IFR Probe Stuck (250-300 Kts) Would Not Come Out At First. Then Stuck Going Back In For A While	Adjusted Probe Out Sequence Valve
22 MAR	Hook Unsafe Light Stays On in The Air (Hook Down)	Tightened And Reset Hook Down Switch.
22 MAR	Pitot Heat (down)	Replaced Connector On Back Of Pitot Tube

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAV INST 3750.6D

ENCLOSURE (7)

26 MAR	Canopy Lock Indicator Shows Partially Open- Goes Over Center	Adjust Indicator: Canopy Lock Hook Fully.
26 MAR	IFT Probe- Sticks And Chatters Going In And Out	Lubricated Probe Barrel

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAV INST 3750.6D

ENCLOSURE (7)

RESUME OF PILOT'S TOTAL FLYING EXPERIENCE IN THE CASE OF LTJG R. P. PHILLIPS, USN, (b) (6) [redacted]

DUTY STATION	DATE	TYPE FLYING	TYPE A/C	HOURS
NAAS SAUFLEY	10/60-12/60	STUDENT	T-34	39.6
NAS PENSACOLA	1/61-7/61	STUDENT	T2J-1	117.3
NAAS CHASE	8/61-10/61	STUDENT	F9F-8T	127.2
NAAS CHASE	10/61-12/61	STUDENT	F11F-1	26.7
NAAS CHASE	12/61	STUDENT	F9F-8T	1.4
NAS PENSACOLA (PHOTO SCHOOL)	1/62-2/62	STUDENT	T-28-B	2.0
		STUDENT	SNB-5P	9.0
		STUDENT	F9T-8T	3.9
NAS MIRAMAR VA-126 (INST TRA.)	3/62-4/62	STUDENT	F9F-8T	22.0
VF-124 (RCVG)	4/62	STUDENT	F9F-8T	1.7
		STUDENT	F8U-1	4.1
VFP-63	4/62-3/63	OPERATIONAL	RF-8A	258.3
				613.2

TOTAL FLIGHT TIME	613.2
TOTAL JET TIME	562.6
TOTAL TIME IN TYPE	262.4
CARRIER LDG'S DAY/NIGHT	41/6

NO PREVIOUS ACCIDENTS

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D

ENCLOSURE (11)

U. S. NAVAL AIR STATION
NORTH ISLAND
SAN DIEGO 35, CALIFORNIA

7031-932
17 May 1963

From: Commanding Officer, U. S. Naval Air Station, North Island, San Diego 35, California
To: Commanding Officer, Light Photo Squadron 63

Subj: Accident, Model RF-8A aircraft, BUNO 146877, Engineering Report; forwarding of

Ref: (a) BUWEPSFLTREADREPPAC 030015Z Apr 1963

Encl: (1) NAS NI Engineering Report No. 15-63

1. Enclosure (1) is forwarded as requested by reference (a).

(b) (6) [redacted]
By direction

Copy to: (with encl (1))
BUWEPS (FWAE-1412/F-123)
BUWEPSFLTREADREPPAC
BUWEPSFLTREADREPLANT
COMNAVAIRPAC
COMNAVAIRLANT
NAS NORVA
NAVAVSAFECEN NORVA (LCDR (b) (6) [redacted]
Chance Vought via BUWEPSREP Dallas

VJO:es
7031

AERONAUTICAL ENGINEERING GROUP
OVERHAUL AND REPAIR DEPARTMENT
U. S. NAVAL AIR STATION
NORTH ISLAND
SAN DIEGO 35, CALIFORNIA

13 May 1963

ENGINEERING REPORT NO. 15-63

Subj: Accident, Model RF-8A Aircraft, BUNO 146877, Control No. 2097-63

Ref: (a) BUAEPSFLTREADREPPAC 030015Z Apr 1963

Encl: (1) NAS NORIS Photo LAA-21972
(2) NAS NORIS Photo LAA-21970
(3) NAS NORIS Photo LAA-21971
(4) NAS NORIS Photo LAA-21987
(5) NAS NORIS Photo LAA-22154L

1. Reference (a) requested on Engineering investigation and assigned control No. 2097-63 on the following items:

a. Two each inboard center section droop cylinders, P/N 188EA-11 and P/N 188EA-12.

b. Two each outboard center section droop cylinders, P/N 189EA-11 and P/N 189EA-12.

c. Two each outer wing panel droop cylinders, P/N 6209EL and P/N 6209ER.

d. One each aileron power control cylinder, P/N CV15-908068-29.

e. One each U.H.T. power control cylinder, P/N CV21-601051-16.

f. One each rudder power control Servo cylinder, P/N CV15-151039-3.

g. Section of left wing fuel cell.

h. One 3/8" box-open end wrench.

2. The description of findings for each group corresponding to paragraph 1 are discussed below.

a. Inboard center section droop cylinders, enclosure (1).

(1) Cylinder, P/N 188EA-11. The full droop piston portion only was received. The locking fingers of master lock piston, P/N 188E-2, indicated that piston was locked in fully retracted position.

Encl(4) NAS NS Ltr 7031-932

(2) Cylinder, P/N 188EA-12. Retraction sleeve, P/N 188C3-0, indicates that the master lock piston, P/N 188E2, was locked in fully retracted position at impact. Piston, P/N 188D6-2 (also called the cruise piston) appeared to be fully extended. Reference enclosure (1). After cutting the cylinder in half, definite indications were observed that positively showed piston, P/N 188D6-2, in the fully retracted position at time of impact.

b. Outboard center section droop cylinders, enclosure (2).

(1) Cylinder, P/N 189EA-11. The master lock piston, P/N 189EA8, was definitely locked in the retracted position. Cutting the cylinder, P/N 189E12, apart in area of the piston, P/N 188D6-3, provided definite indications that this piston was fully retracted at time of impact.

(2) Cylinder, P/N 189EA-11. The master lock piston, P/N 189EA8, was definitely locked in the retracted position. Cutting the cylinder, P/N 189E12, apart in area of the cruise piston, P/N 189D6-3, provided definite indications that this piston was fully retracted at time of impact.

c. Outer wing panel droop cylinders, enclosure (3).

Both cylinders, P/N 6209EL and P/N 6209ER, had piston A, P/N 6209-3B, locked in the fully extended position. Cutting of one cylinder was necessary to determine that piston B, P/N 6209C5, was fully extended at time of impact.

It is to be noted that the outer wing panel droop cylinders have both pistons A and B fully extended when in the clean position and both fully retracted when full droop is utilized.

d. Aileron power control cylinder, P/N CV15-908068-29. This cylinder was not split or cracked through the bleed ports. The piston was extended approximately 3/4 of the stroke. Appeared to have operated normally prior to crash.

e. Unit horizontal tail power control cylinder, P/N CV15-601051-16. This cylinder was not split or cracked through the bleed ports from over pressurization. The piston was at approximate center of travel at time of impact. Rod end, P/N CV15-601674-4, had one-half of the lug missing. The Metallurgical laboratory indicates that lug failed from a shear and bending load. Very little damage was noted on other half of lug. See enclosure (4).

f. Rudder power control servo cylinder, P/N CV15-151039-3. Piston was in approximate center of travel, or neutral, at time of impact.

g. Section of left wing fuel cell. Piece received was burned and charred from flames after impact. Metallurgical laboratory indicates that there is no evidence of an in-flight fire.

VJO:es
7031

h. One 3/8 inch box-open end wrench. This wrench was turned in to the Metallurgical laboratory to determine whether the markings could be traced to any particular point that it could have been in at time of impact.

The laboratory made a spectographic analysis of the indentations and identified minute quantities of a cobalt-nickel alloy. The laboratory notes that the turbine blades in the J-57 engine contained quantities of this alloy. The laboratory also indicates that this wrench was not exposed to jet engine temperatures for any length of time. See enclosure (5).

3. Conclusions:

a. All of the droop cylinders were in the clean position at time of impact.

b. The position of the piston from the left aileron power control cylinder indicates that the aileron was in the up position. This would be normal for a left bank.

c. The UHT piston was in approximate neutral or mid point position at time of impact. The pin holding the end fitting is secured by a 1/4 inch bolt and 2 large flat retaining washers. (b) (5) [redacted]

d. The rudder power control was functioning normally at time of impact.

e. There was no evidence of in-flight fire prior to crash.

f. The wrench is not considered to have contributed to this accident. The traces of the cobalt-nickel alloy were probably received during the breakup of the aircraft after initial impact.

4. Recommendations: None.

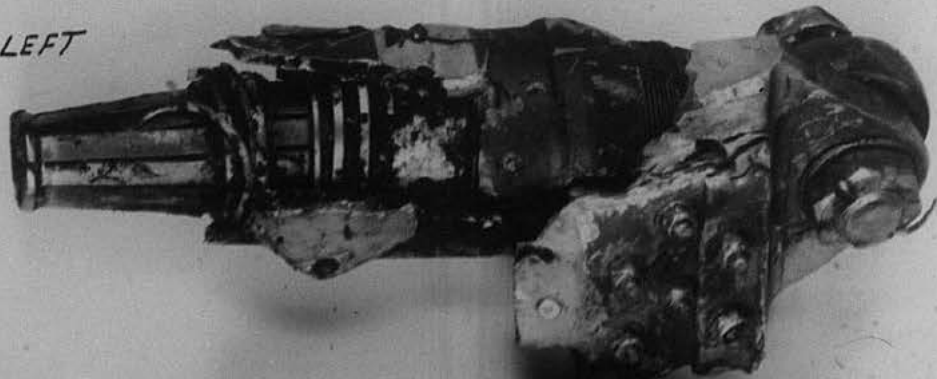
Report by (b) (6) [redacted]

APPROVED:

(b) (6) [redacted]

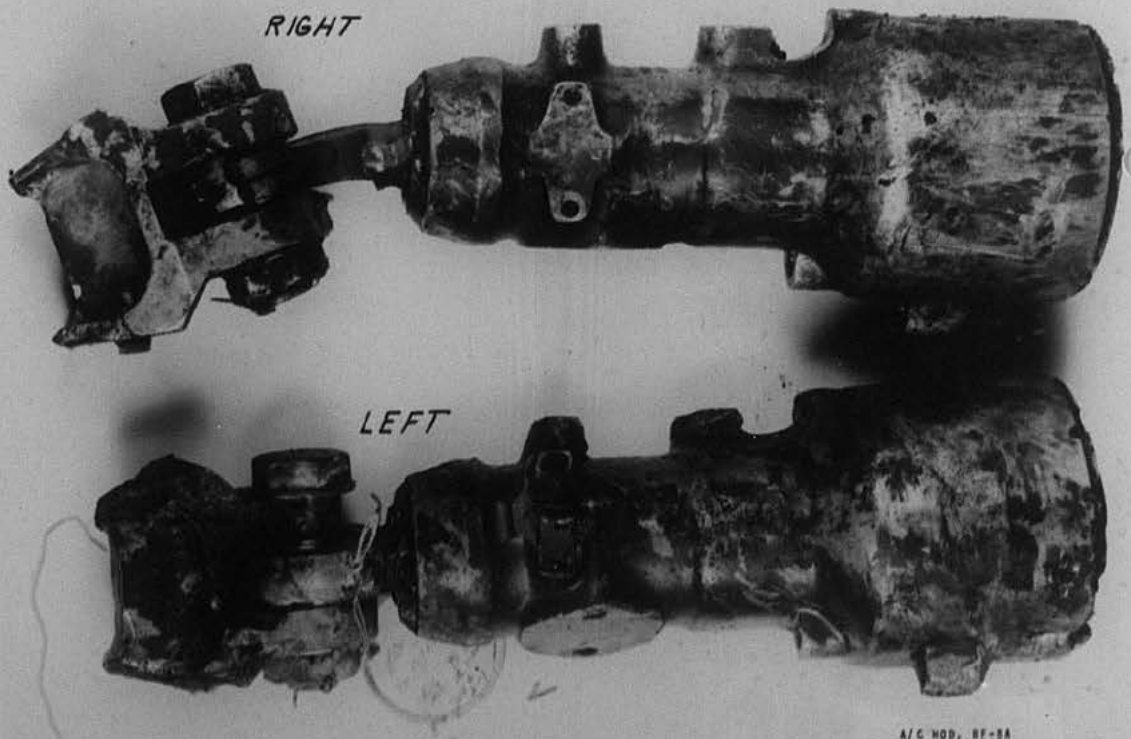
Aeronautical Engineering Superintendent

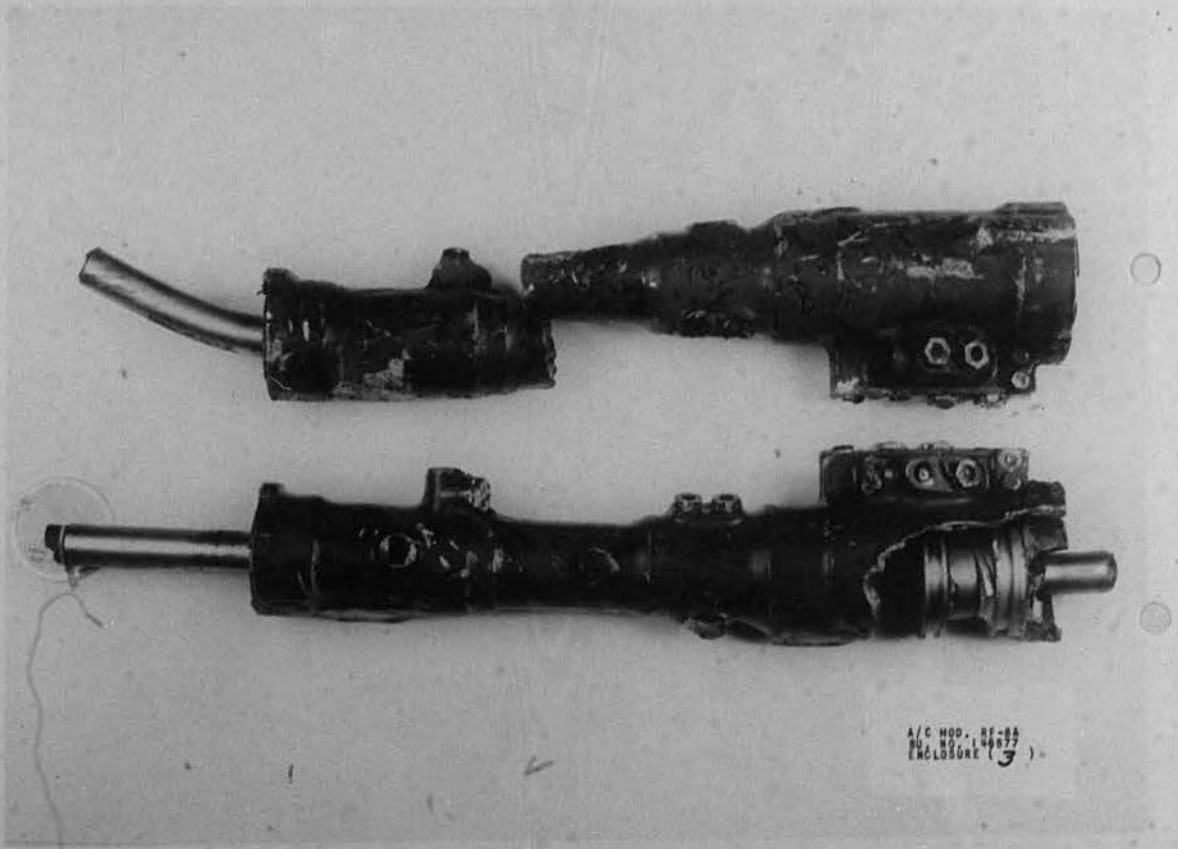
LEFT

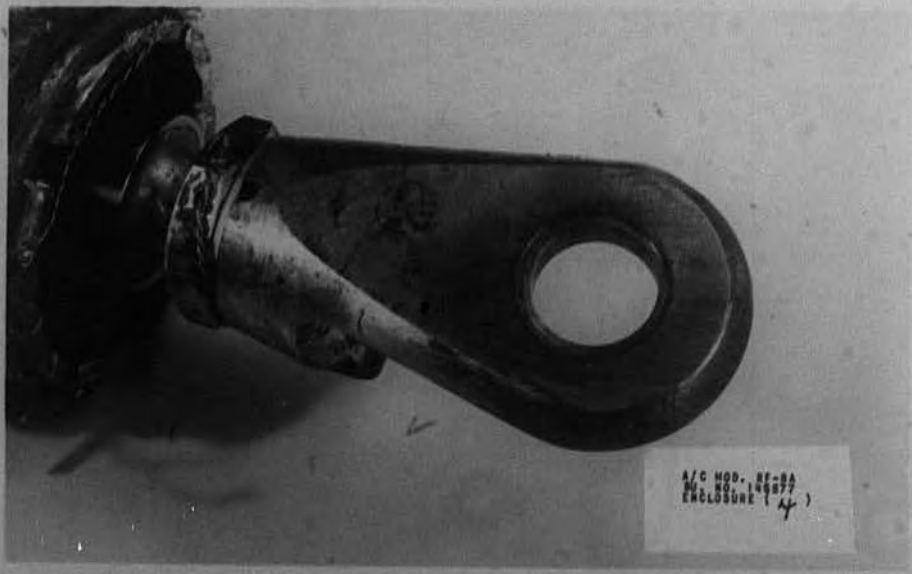


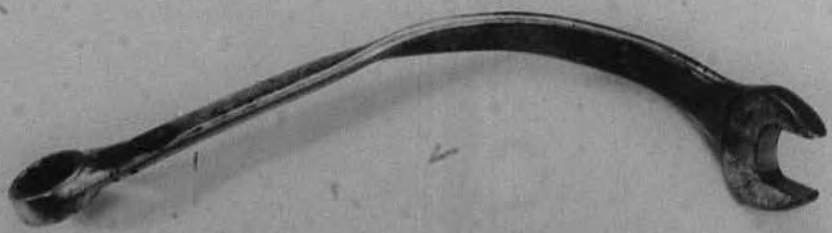
RIGHT

A/C MOD. RF-8A
BU. NO. 140877
ENCLOSURE (1)


RIGHT
LEFT


A/C MOD. RF-8A
BU. NO. 146877
ENCLOSURE (3)


A/C MOD. RE-84
ENCLOSURE (4)



3/8 BOX END WRENCH
FOUND AT RF-8A CRASH
BU. NO. 146877
ENCLOSURE (5)

1. OVERHAUL ACTIVITY: NAS NI SD

REPORT NO.: 38

3. DATE OF D/I: 5/6/63

4. ASSEMBLY NOMENCLATURE AND PART NO.

ENGINE: X

5. ASSEMBLY (Model): J57-P4A

6. ASSEMBLY (Serial): P627569

7. ASSEMBLY NOR: 77445

8. DATE SERVICED: 3/27/63

9. REMOVED FROM (Eng Mod)

10. REMOVED FROM (Eng Ser)

11. TOTAL HRS SINCE NEW: 1054.1

12. HRS SINCE LAST O/H: 173.7

13. DATE LAST O/H: 11/30/61

14. LAST OVERHAUL ACTIVITY: NORIS

15. NO. PREV. O/H'S: 2

16. AIRCRAFT (Model): RF-8A

17. AIRCRAFT (Serial): 146877

18. OPERATING ACTIVITY: VFP-63

19. FOR ISTD / AAR: AAR-3-63

20. REASON FOR REMOVAL AND CODE: Accident/Incident Damage 4B

21. FINDINGS: O [X] NO DISCREPANCY; R [ ] BASIC (MFG/DESIGN) DISCREPANCY; N [ ] NON-BASIC (MAINT/OPER) DISCREPANCY; F [ ] FOREIGN OBJECT DAMAGE

22. PRIMARY PARTS FAILURE (Part No.) | CAUSE | ZONE

23. DISCREPANT PARTS (Part No.) | CAUSE

24. DESCRIPTION OF FINDINGS (Include name and part no. of primary part failure): See attached sheet

DIST:
BUWEPS (TWAE-4/RAPP-2/V-123)
NAVAIRTECHSERVFAC PHILA
COMNAVAIRPAC
COMNAVAIRLANT
COMFAIR San Diego
NAVAVSAFECEN NORVA (Lt.Cdr. (b) (6) [redacted]
VFP-63
BUWEPSFLTREADREPPAC (FRR-3331)
BUWEPSFLTREADREPLANT
BUWEPSREP East Hartford

PRIORITY

AAR
2801032 MAR 63
3-27-63

25. PERTINENT BULLETINS, CHANGES, ETC. INCORPORATED | YES | NO

26. CONCLUSIONS: See attached sheet

28. RECOMMENDATIONS: See attached sheet

29. [X] PRIORITY [ ] ROUTINE | REQUESTED BY: BUWEPSF (b) (6) [redacted]

(b) (6) [redacted]

REFERENCE: 1000152 April 1963

30. ORDER NO.

APPLICABLE INCORPORATED

31. TITLE: Aero. Engineering Superintendent

32. DATE: 5/7/63

REPORT SYMBOL BUWEPS 4730-2

DISASSEMBLY AND INSPECTION REPORT BUWEPS FORM 4730/2 (11-61)

ES:es
7031

NAS NI SD PRIORITY DIR NO. 38

BUWEPSFLTREADREPPAC 100015Z (control No. 3080-63) April 1963 requested priority investigation coverage to determine if this engine was under power at impact. VFP-63 102030Z April and AAR serial No. 3 of April 1963 refer.

26. Description of Findings:

a. The basic engine in part, less the associated accessories with afterburner attached, was received at NORIS on 10 April 1963, for investigation coverage. The engine had received heavy shock damage on impact. The complete N-1 compressor rotor, including the casing assemblies, was not recovered from the accident scene and is not included in this report.

b. The 8th and 9th stage discs of N-1 compressor each were shattered on impact. Five and 10 blades in respective discs were deflected aft with little evidence of rotational deflection as shown on enclosures (1) and (2).

c. The basic engine and afterburner assembly had compressed on impact to a total length of approximately 4½ feet as shown on enclosures (3) through (5). Bits and pieces of the N-1 rotor assembly, including blade and vane sections, were recovered from the area of impact and exhibited evidence of high rotation at that point as shown in enclosure (6) and color photo (7).

d. The engine was sectioned through the use of arc cutting. The main rotor ball and roller bearings Nos 2 through 6, were found in good condition less impact damage.

e. The N-2 compressor rear hub, P/N 238543, had separated on impact immediately aft of No. 4 bearing and showed no evidence of torsional movement in the area of separation as shown on enclosure (8).

f. Blading on the front compressor drive turbine rotor discs (2nd and 3rd stage) showed deflection in direction opposite normal engine rotation and breakage as shown on enclosures (9) and (10). All 1st stage turbine blades were sheared flush with disc slots and had remained in the general area of the rotor through compression of the assemblies on impact.

27. Conclusions:

a. From the general condition of the engine with respect to compression which was received on impact, and the degree of damage received by the compressor/turbine assemblies, particularily in area aft of the N-1 compressor, it appears probable that the engine was rotating at relatively high speed at impact. The forward (N-1) compressor rotor assembly, including the case sections, apparently had separated at the instant of impact and prior to advanced rotational blade damage.

b. The immediate cause for the accident was not considered due to an engine failure.

ES:es
7031

NAS NI SD PRIORITY DIR NO. 38

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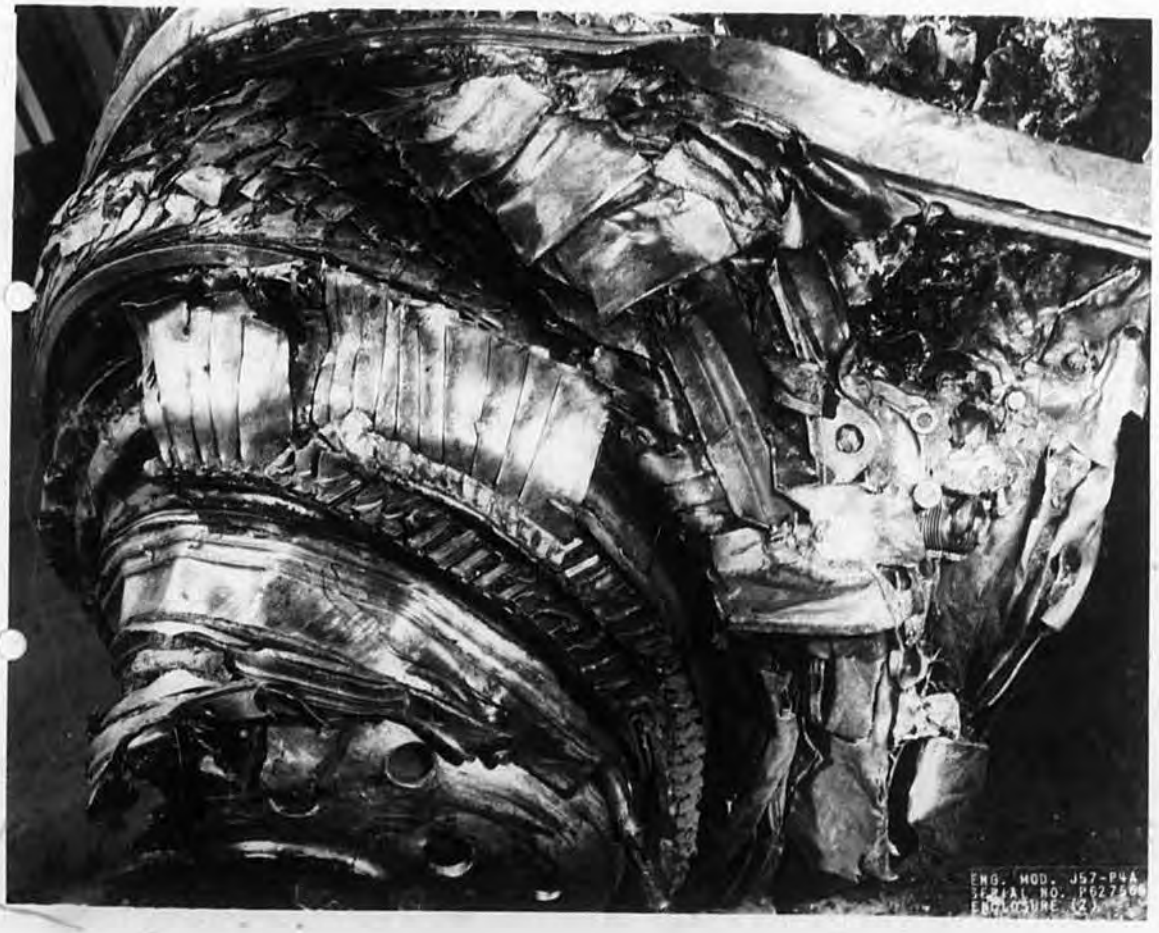
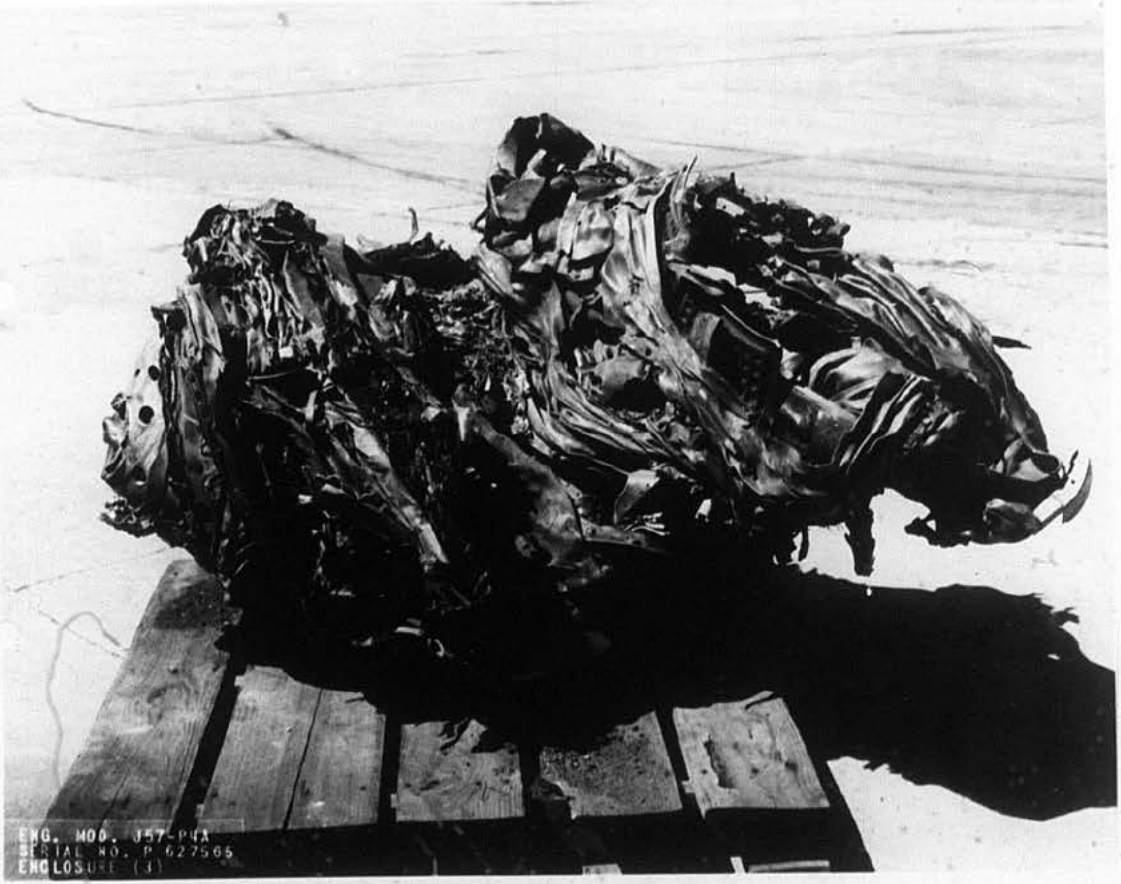
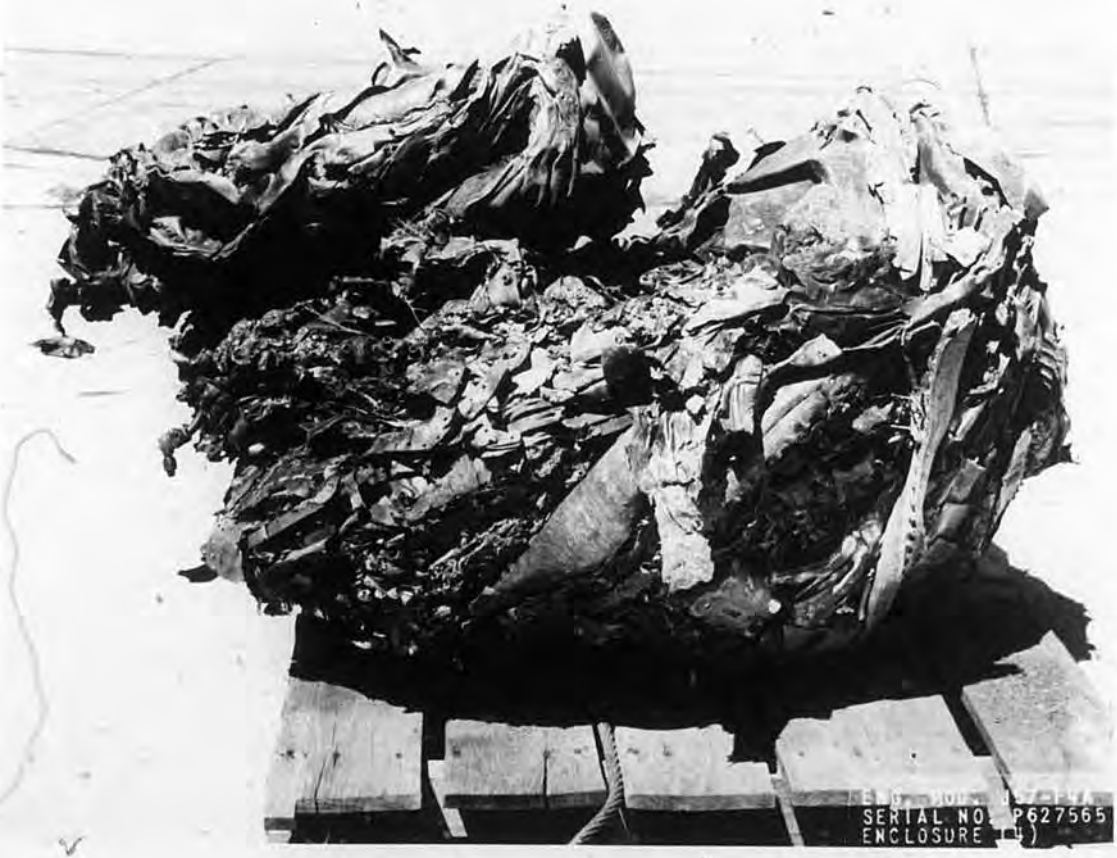
28. Recommendations: None

Encl:
(1) NAS NI Photo LAA 22047
(2) NAS NI Photo LAA 22048
(3) NAS NI Photo LAA 22049
(4) NAS NI Photo LAA 22050
(5) NAS NI Photo LAA 22051
(6) NAS NI Photo LAA 22110
(7) NAS NI Photo LAA 22155
(8) NAS NI Photo LAA 22071
(9) NAS NI Photo LAA 22072
(10) NAS NI Photo LAA 22073

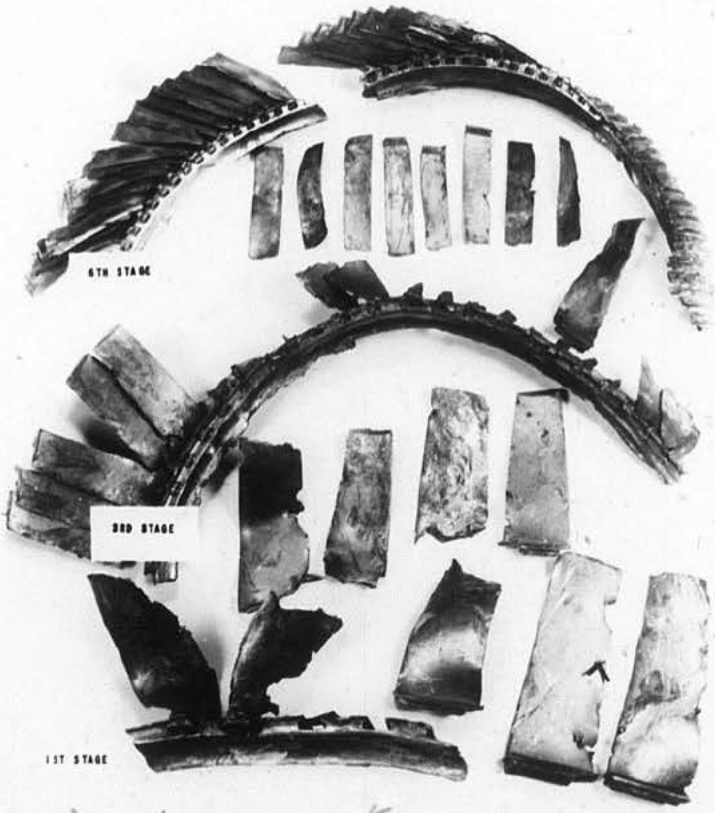
ENG. MOD. J57-P4A
SERIAL NO. P627565
ENCLOSURE (1)


ENG. MOD. J57-P4A
SERIAL NO. P627500
ENCLOSURE (2)

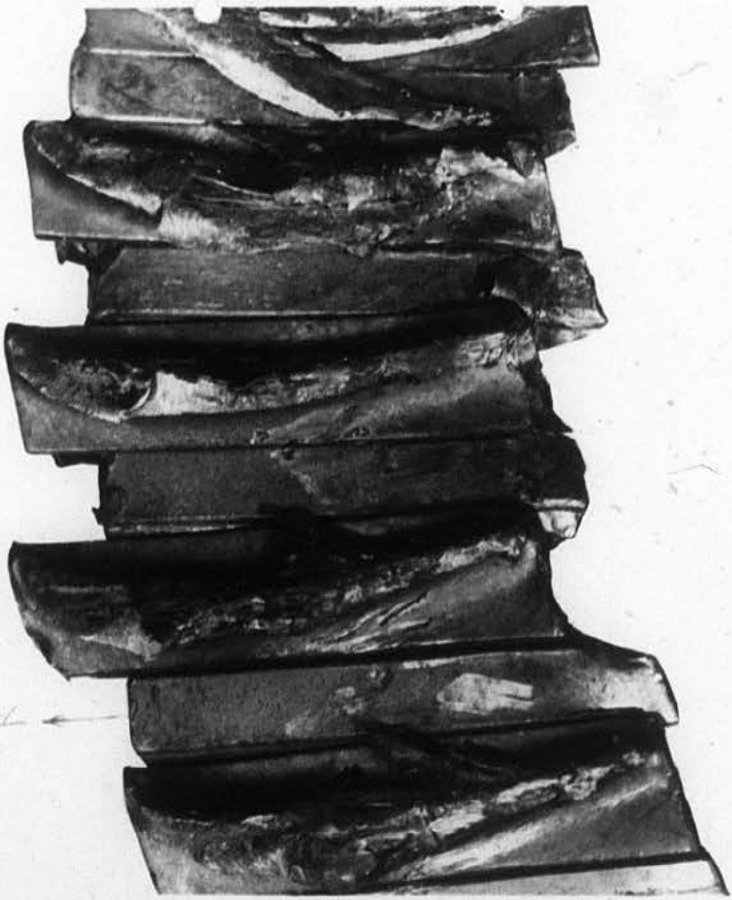

ENG. MOD. J57-P1A
SERIAL NO. P 627565
ENCLOSURE (3)


SERIAL NO. P627565
ENCLOSURE (4)

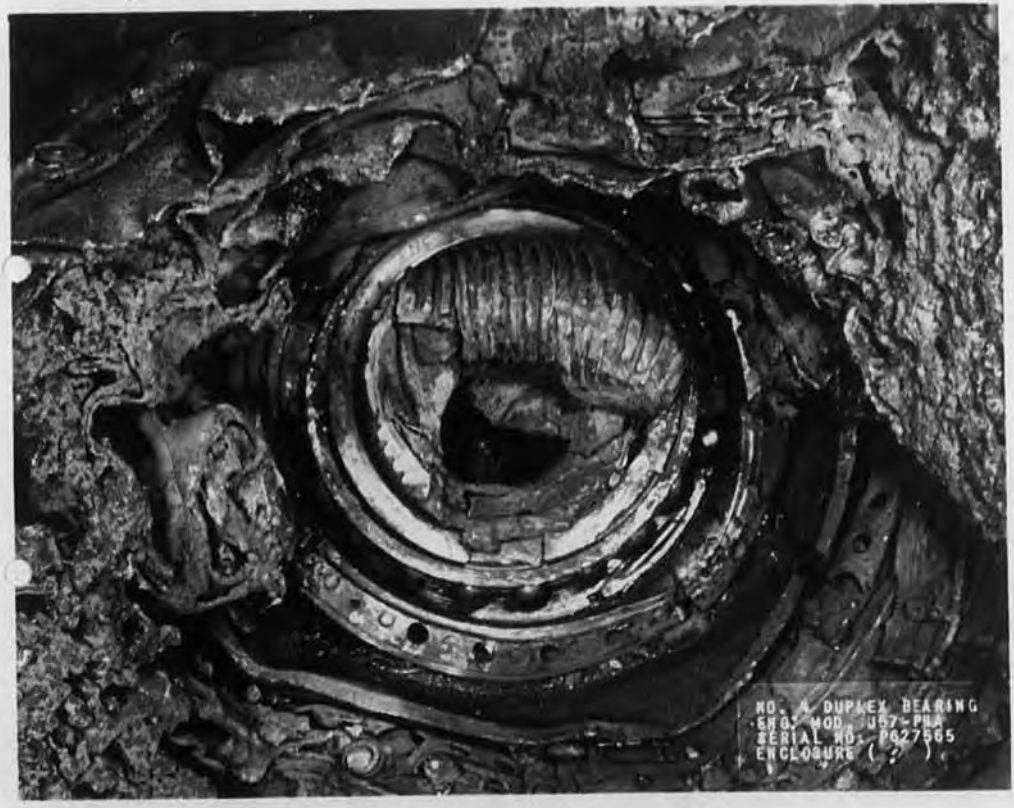
ENG. MOD. J57-P4A
SERIAL NO. P427565
ENCLOSURE (5)



M-1 COMPRESSOR DISC,
BLADE & VANE SECTIONS
ENG. MOD. J57-P4A
SERIAL NO. P627565
ENCLOSURE (6)

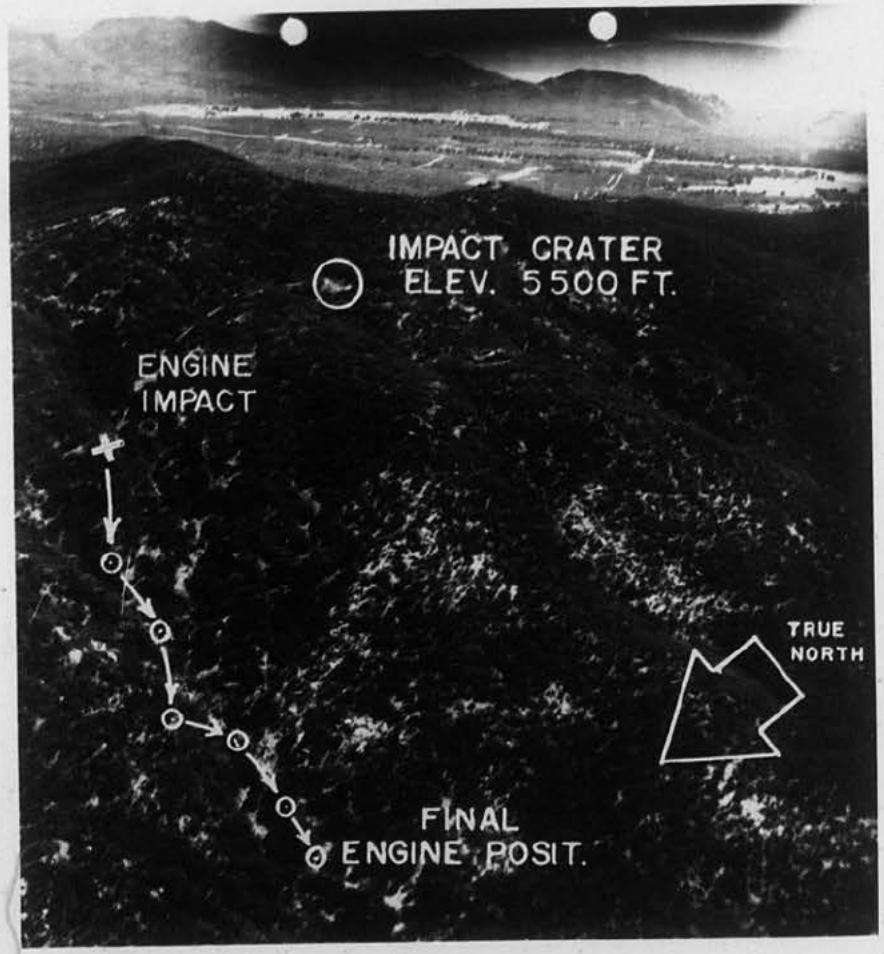


6TH STAGE COMPRESSOR
DISC
ENGINE MODEL J57-P4
SERIAL NO. P427565
ENCLOSURE (7)

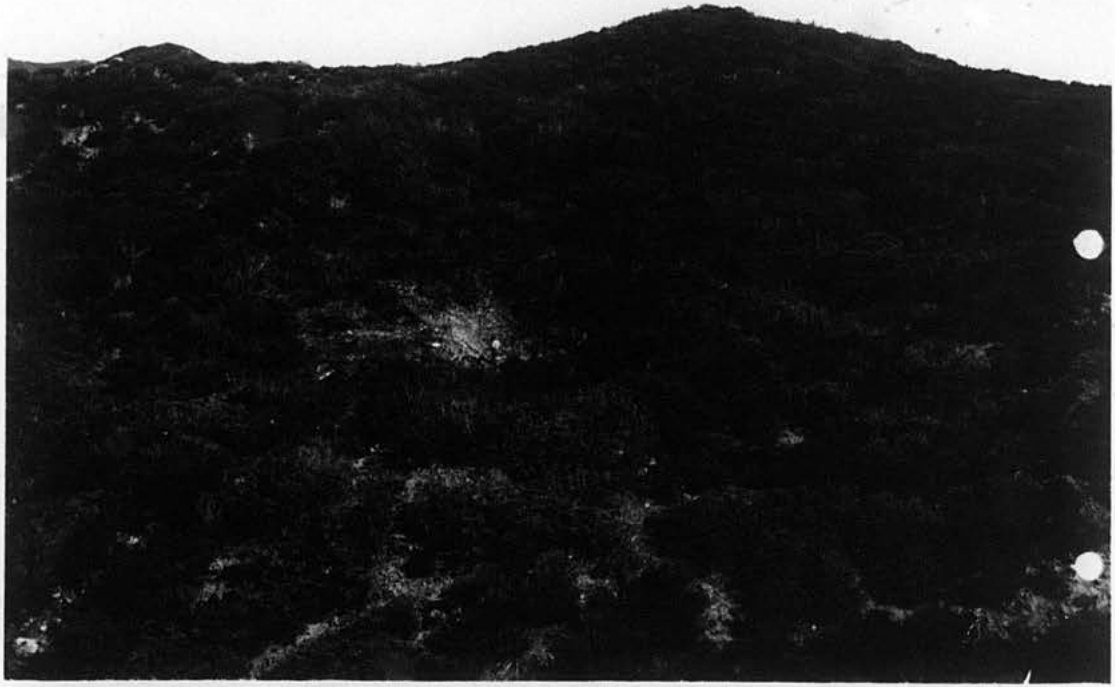

NO. 4 DUPLEX BEARING
ENG. MOD. J57-P4A
SERIAL NO. P627565
ENCLOSURE (?)

2ND STAGE TURBINE
ROTOR
ENG. MOD. J57-P4A
SERIAL NO. P027565
ENCLOSURE 1

3RD STAGE TURBINE
ROTOR
ENG. MOD. J57-P6A
SERIAL NO. P627565
ENCLOSURE (18)



VFP-63 AAR 3-63, RF-8A BUNO 146877, CORKTIP 911, OCCURRING 27 MARCH 1963
PILOT PHILLIPS. Aerial view of crash area.
SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 70, OPNAVINST 3750.6D
ENCLOSURE (8)



VFP-63 AAR 3-63, RF-8A BUNO 146877, CORXTIP 911, OCCURRING 27 March 1963
PILOT PHILLIPS. AERIAL VIEW OF IMPACT CRATER
SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA. 7C, OPNAVINST 3750.6D
ENCLOSURE (9)

VFP-63 AAR 3-63, RF-8A BUNO 146877, CORRTIP 911, OCCURRING 27 March 1963
PILOT PHILLIPS. PHOTOGRAPH OF AIRCRAFT ENGINE.
SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 70, OPNAVINST 3750.6D
ENCLOSURE (10)

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 1
OPNAV FORM 3750-8 (Rev. 5-58) See OPNAVINST. 3750.6C for instructions - SPECIAL HANDLING REQUIRED

SECTION A - IDENTIFICATION

1. Unit (Name and mailing address of activity)			2. For Number
[redacted] (b) (6) [redacted], MIRAMAR 45, CALIFORNIA		[redacted] (b) (6) [redacted]	3-63
[redacted] (b) (6) [redacted] and Signature of Medical Officer)	DATE	[redacted] (b) (6) [redacted] Officer of Appointing Authority	DATE
[redacted] MC USN	11 Apr 63	[redacted] DR USN	13 Apr 63
[X] ACCIDENT [ ] GROUND ACCIDENT [ ] INCIDENT	5. TIME AND ZONE 1015 U	7. DATE 27 Mar 63	33.22 North, 116-40 West 025 deg., 41.2 nautical miles, NAS Miramar, Tacan

8. MODEL A/C	9. BUNO	11. NO. OF OCCUPANTS	12. TYPE ACCT.	13. DAMAGE CODE	14. UNIT OPERATING A/C
RF-8-A	146877	1	A	A	VFP-63

15. INDIVIDUALS INVOLVED - USE ADDITIONAL SHEETS IF REQUIRED. NAME (Last, first and middle initials)	16. UNIT TO WHICH ATTACHED	17. RANK, RATE	18. FILE/SERV. NO. DESIGNATOR	19. BILLET	20. BRANCH OF SERVICE	21. INJURY CODE	22. DISPOSITION
IN CONTROL OF A/C							
a. PHILLIPS, Robert Paul	VFP-63	LTJG	[redacted] (b) (6) [redacted]	Pilot	USNR	[illegible]	41
b.							
c.							
d.							

23. CLASSIFICATION OF ITEMS 15-22 WHEN NECESSARY

24. MODEL - OTHER A/C IF INVOLVED	25. BUNO	26. NO. OF OCCUPANTS	27. UNIT OPERATING A/C	28. DAMAGE CODE	29. BUNO NO.

30. DETAILED NARRATIVE ACCOUNT OF ACCIDENT (Use additional 8 X 10½ plain sheets if required)

At 0830 U on March 27,1963, LTJG R.P. PHILLIPS, [redacted] (b) (6) [redacted] U.S. Naval Reserve launched from NAS, Miramar in RF-8-A, BuNo 146877 Mod[redacted], for a 2 hour photo/instrument flight. LTJG PHILLIPS was scheduled with LT [redacted] (b) (6) [redacted] the flight leader who briefed for section afterburner takeoff and climb to 10,000 feet where the two aircraft would separate to accomplish individual photographic missions. Upon completion of the photo, the two aircrafts were to rendezvous for a practice section Tacan penetration to NAS, Miramar. The preflight, start, taxi, climb, photo missions, section penetration and VFR departure were normal in all respects.

Following the VFR departure after the penetration, the flight climbed to 20,000 feet where two formation wingover maneuvers were performed. Upon completion of the second wingover, at an altitude of 15 - 18,000 feet the lead aircraft, LT [redacted] (b) [redacted] continued the nose low attitude and commenced a descending left spiral on an initial heading of North at an estimated speed of 400 - 425 knots while pulling 2 - 3 "G"s. Shortly thereafter the leader reduced power to idle and extended partial speed brakes. LT [redacted] (b) [redacted] leveled off at 8,000 feet indicated continuing a 2 - 3 "G"s level turn. At this time, LT [redacted] (b) [redacted] noticed LTJG PHILLIPS was no longer in formation. The last time LT [redacted] (b) [redacted] saw Corktip 911 was just prior to commencing the descending spiral. When he did not receive any response to radio calls, LT [redacted] (b) [redacted] made a 180 degree turn and noticed a small amount of black smoke. He investigated the smoke and reported the possibility of a crash over the radio. Search and rescue helicopters were immediately dispatched. They confirmed the presence of a crash.

SECTION B - MEDICAL OFFICER'S QUESTIONNAIRE

YES	NO	DID THE FLIGHT SURGEON:	(If "NO" state reason in space below.)
X		1. VISIT THE SCENE OF THE MISHAPT	
X		2. PARTICIPATE FULLY IN THE FIELD INVESTIGATION?	
X		3. PARTICIPATE FULLY IN THE DELIBERATIONS OF THE A/C ACCIDENT BOARD?	

GIVE APPROXIMATE NUMBER OF HOURS SPENT BY THE FLIGHT SURGEON	A. IN FIELD INVESTIGATION	B. IN CHARG DELIBERATIONS	C. IN PREPARATION OF THIS REPORT
	9	6	5

1. REPORT PREPARATION CHECK LIST

[X] ALL PARTS OF FORM COMPLETED [ ] SURVIVORS INTERVIEWED [X] PHOTOS [X] CONCLUSIONS AND RECOMMENDATIONS [X] REQUIRED COPIES FURNISHED

"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAV INST. [illegible]"

U.S. GOVERNMENT PRINTING OFFICE

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT—Page 2

OPNAV FORM 3750-6A (Rev. 5-58) OPNAV REPORT 3750-7

SECTION C—PHYSIOLOGICAL, HUMAN ENGINEERING, DESIGN, SOCIO-PSYCHOLOGICAL AND TRAINING FACTORS WHICH CONTRIBUTED IN SOME DEGREE TO THIS A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT

NAME OF INDIVIDUAL (Last, first, middle): PHILLIPS, Robert Paul

MODEL A/C: RF-8-A

Check E-Established, S-Suspected, or P-Present for each factor selected. Additional 8X10½ plain sheets will be used for the supporting account of items checked below. Identify each statement with the factor and section identification (e.g., C1, C2, etc.). Attach all sheets pertaining to these factors to this form upon completion.

E	S	P	✓ FACTORS
			(b) (5), (b) (6) [redacted]
			HUMAN ENGINEERING AND DESIGN:
			15. Personal equipment
			16. Displays and/or controls
			17. Work arrangement
			18. Working environment
			19. Habit interference
			20. OTHER:
			SOCIO-PSYCHOLOGICAL: (Emotional stress from non-duty sources)
			21. Pregnancy
			22. Illness or death
			23. Arguments
			24. Elated/Depressed state
			25. Personal habits - Drinking
			26. - Sex
			27. - Gambling
			28. - Debts

E	S	P	✓ FACTORS
			SOCIO-PSYCHOLOGICAL: (Emotional stress from duty sources)
			29. Expeditings/Delays
			30. Weather
			31. Mechanical Problems
			32. Social and working relationships
			33. Personal comfort
			34. Regulations
			35. Facilities
			36. Navigation
			37. Duty assignment
			38. Personality traits
			NON-STRESS FACTORS:
			39. Faulty attention
			40. Poor judgement
			41. Forgetfulness
			42. OTHER SOCIO-PSYCHOLOGICAL FACTORS
			TRAINING FACTORS:
			43. Physiological training
			44. Emergency Procedures training
			45. Survival and rescue training
			46. Refresher training
			47. Transition training
			48. OTHER:

SECTION D — AIR CREW DATA (fill in where applicable)

1. Flight time past 30 days	19.0	7. Total time in model	262.4
2. Flight time last 24 hours	3.6	8. Number of days grounded last month, give reason	0
3. Number of flights in last 24 hours	2		
4. Time at controls this flight	1.6	9. Number of and dates of previous accidents	0
5. Number of hours duty last 24 hours	0		
6. Total flight time	613.2		

SECTION E — CONTRIBUTING FACTORS AND THEIR ANALYSIS (As continued from Part I, Sect. D and Part VIII of the ARR)

NOTE: Fill in this section only on that set of forms prepared for FIRST individual listed in Section A, i.e. 15(a). Attach additional sheets as necessary.

See Addendum

"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAV [illegible]"

ADDENDUM to Section C, Page 2 of MCR 3-63, VFP-63

(b) (5), (b) (6)

[redacted]

"SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 70, OPNAV INST 3750.6D"

THE ANALYSIS

Due to the lack of concrete evidence in any particular area, the Board can only theorize in the analysis.

a. PERSONNEL FACTORS

1. There is no indication that LTJG PHILLIPS suffered any physical impairment or incapacity prior to the crash. His performance during the flight preceeding the accident was normal in all respects.

(b) (6)

[redacted]

3. LTJG PHILLIPS was an outstanding aviator. He had progressed through all phases of his training most successfully. Instructors and pilots assigned with him were high in praise of his ability, motivation and mental attitude.

4. LTJG PHILLIPS at no time during the flight reported any discrepancies in his aircraft.

(b) (5)

[redacted]

6. The flight maneuver performed by the flight leader, LT(b) [redacted] was in no way dangerous or contrary to any regulations. It provided sufficient altitude for safe completion.

7. The possibility exists that LTJG PHILLIPS, in order to regain or maintain cruise position, overcontrolled his aircraft. With an estimated level-off airspeed of 300 knots, Corktip 711, with an estimated 2000 pounds of fuel, would approach the stall boundary at approximately 270 knots if 4 "G" were applied.

8. The lack of eyewitnesses to the maneuver and crash precludes any determination about the maneuvers, flight attitude and aircraft configuration of Corktip 711. The report of the forest service personnel that they did not hear any aircraft would indicate that the flight was at a low engine power setting during the descent.

ADDENDUM TO PAGE 2, SECTION E, of MOR: 3-63, VFP-63 (Continued)

(b) SUPERVISORY FACTORS

(1) There were no supervisory factors. LTJG PHILLIPS' experience, training, and ability was considered adequate.

(2) BUNO 146877, Corktip 911, was in all respects ready for flight. There were no discrepancies reported prior to or during the flight.

(3) A 3/8" combination wrench was found among the wreckage. As there were scratches and indentations impressed upon its surface, the wrench was submitted for DIR. The inspecting engineer concluded that these marks were not caused by a binding or rubbing force. Further, the hardness of the metal indicated that an extremely heavy blow was required to make these marks.

(c) MATERIAL FAILURE OR MALFUNCTION.

(1) There was no evidence of material failure or malfunction.

(b) (5)

[redacted]

(3) It is known that the outer panels of the wing were in place at the time of impact. One locking mechanism from each wing was found with the pin joining a portion of the outer panel to the wing.

(4) From the parts recovered, it could not be determined that the ejection seat had failed. A bottom portion of the ejection gun rail showed that the seat had moved forward at the time of impact, rather than upward.

(d) FACILITIES

Facilities were not a factor in this accident.

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT – PAGE 3
OPNAV FORM 3750-8B (5-58)

OPNAV REPORT 3750-7

SECTION F - SAFETY, PERSONAL, AND SURVIVAL EQUIPMENT

Prepare a narrative account of damaged or failed items. Identify each item discussed (e.g., F1, F2, etc.)

NAME OF INDIVIDUAL (Last, first, middle): PHILLIPS, Robert Paul

MODEL A/C: RF-8-A

GENERAL DESCRIPTION OF EQUIPMENT	AVAILABLE YES	AVAILABLE NO	SPECIFIC MODEL OR TYPE	UTILIZED YES	UTILIZED NO	FAILED YES	FAILED NO	DESCRIPTION OF DAMAGE TO EQUIPMENT
1. Shoulder harness	~~X~~		Martin Baker F-5	~~X~~			~~X~~	
2. Lap belt	~~X~~		Martin Baker F-5	~~X~~			~~X~~	
3. Inertia reel	X		Martin Baker F-5	X			X	
4. G-Suit	X		Z-3 Cutaway	X			X	
5. Pressure suit-full or partial		~~X~~						#5 & 6. See attached Addendum
6. Exposure suit		X						
7. Flight suit (Other than above)	X			X			X	
8. Helmet	X		APH-5	X			X	
9. Gorgles/Eyeshield	X		APH-5	X			X	
10. Shoes	X		Flight Boots	X			X	
11. Gloves	X		Summer Flying	X			X	
12. Life vest	X		MK 3C		X			
13. Life raft	X		PK-11 High		X			
14. OTHER:			~~Speed Bailout Kit~~					
15. SIGNAL DEVICE - Flare (Night)	X		MK-13-Mod 0		X			
16. - Flare (Day)	X		MK-13-Mod 0		X			
17. - Dye marker	X		C Marker		X			
18. - Radio	X		PRC - 12 A		X			
19. - Flashlight	X		Bailout Kit		X			
20. - Mirror	X				(2)			
21. OTHER:								
22. SURVIVAL GEAR - Knife	X		Survival		X			
23. - First aid kit	X		PSK-2		X			
24. - Shelter	X		Poncho		X			
25. - Food	X		Food Packet		X			
26. OTHER:								
27. RESCUE - Vehicle								
28. - Sling, Net, Stretcher								
29. OTHER:								

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE

OXYGEN EQUIPMENT

1. MAKE - MODEL OR TYPE: A-13-A
2. MODIFICATIONS, IF ANY: Hardman Fitting, Miniature Regulator (1)
3. REGULATOR - MODEL OR TYPE: Firewell (3)
4. MODIFICATIONS, IF ANY: None
5. PREFLIGHTED BY USER? [X] YES [ ] NO
6. IF NO, WHY NOT
7. LIST DISCREPANCIES NOTED BY PREFLIGHT CHECK
8. OXYGEN SUPPLY: PRIOR TO FLIGHT 4.5 LITERS (Liquid) _____ P.S.I. (Gas); TIME OF ACCIDENT _____ LITERS (Liquid) Unknown P.S.I. (Gas) (2)
9. WAS OXYGEN IN USE AT TIME OF ACCDT. [X] YES [ ] NO
10. IF YES, WAS SELECTOR SETTING [ ] 100% [ ] NORMAL
11. WAS ALL OXYGEN EQUIPMENT NECESSARY FOR THIS FLIGHT (AVAILABLE)? IF NO, LIST ITEMS AND REASON WHY. [X] YES [ ] NO
12. WAS OXYGEN MASK REMOVED AT ANY TIME IN FLIGHT? IF YES, GIVE DURATION AND REASON. [ ] NO [ ] YES

RELEASE DEVICES

13. TYPE CHOKE RELEASE DEVICE: Rocket Jet MB 7-7 Quick Disconnect (1)
14. TYPE HARNESS RELEASE DEVICE: Rocket Fittings MB (1)
15. WHEN WERE RELEASE DEVICES ACTIVATED?
16. WERE DIFFICULTIES ENCOUNTERED WITH RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. [ ] YES [ ] NO
17. WERE DIFFICULTIES ENCOUNTERED AFTER ACTIVATING RELEASE DEVICES? IF YES, STATE DIFFICULTIES, WHEN ENCOUNTERED AND CAUSE. [ ] YES [ ] NO
18. WAS LIFE VEST INFLATED PRIOR TO ACTIVATING RELEASE DEVICES? IF YES, WHAT DIFFICULTIES DID THIS PRODUCE? [ ] YES [ ] NO

(Continued on OPNAV FORM 3750-3C)

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ADDENDUM TO SECTION F, Page 3, of MOR 3-63, VFP-63

Item #4 and 5

Not required for this flight.

"SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 70. OPNAV INST 3750.6D"

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, GROUND ACCIDENT – PAGE 4
OPNAV FORM 3750-8C (5-58)

OPNAV REPORT 3750-7

SECTION G - DETAILED EQUIPMENT QUESTIONNAIRE (Continued)

NAME OF INDIVIDUAL (Last, first, middle): PHILLIPS, Robert Paul

MODEL A/C: RF-8-A

RESTRAINT HARNESS

19. INTEGRATED HARNESS SYSTEM, MODEL/TYPE: MB F-5 (1)
20. INTEGRATED? [X] FULL [ ] PARTIAL
21. MODIFICATIONS, IF ANY STATE REASON:
22. DID INTEGRATED HARNESS FIT PROPERLY? IF NO, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR: [ ] NO [X] YES
23. INTEGRATED HARNESS FITTING WAS CONDUCTED BY: [X] WEARER [ ] FLIGHT SURGEON [X] PARACHUTE RIGGER [ ] AVIATION EQUIPMENT OFFICER [ ] OTHER
24. IF SHOULDER HARNESS WAS USED, WAS IT: [ ] LOCKED [ ] UNLOCKED [ ] TIGHT [ ] SLACK [ ] OTHER CONDITION

HELMET

25. TYPE HELMET: APH-5
26. LIST PRESCRIBED MODIFICATIONS: Hardman Fittings, Chin & Nape Strap (4)
27. OTHER MODIFICATIONS AND REASON FOR THEM: None
28. DID HELMET FIT PROPERLY? IF NO, GIVE REASON: [X] YES [ ] NO
29. HELMET FITTING WAS CONDUCTED BY: [X] WEARER [ ] FLIGHT SURGEON [X] PARACHUTE RIGGER [ ] AVIATION EQUIPMENT OFFICER [ ] OTHER

PARACHUTE

30. TYPE CHUTE: MB F-5 (8)
31. LAST PACKING DATE: 24 Feb 63
32. MODEL/TYPE BAILOUT OXYGEN: MB F-5 (2)
33. AUTOMATIC RIPCORD, IF INSTALLED (Model and type): [ ] NONE O-Delay MB (3)
34. DID AUTOMATIC RIPCORD FAILT IF YES, WHY? [ ] NO
35. WAS RIPCORD ACTIVATION: [ ] MANUAL [ ] AUTOMATIC?
36. IF MANUALLY ACTIVATED STATE REASON AND ANY DIFFICULTIES ENCOUNTERED:
37. DID CHUTE OPEN IMMEDIATELY? IF NO, GIVE REASON: [ ] YES [ ] NO
38. ALTITUDE THAT CHUTE OPENED: FEET
39. OPENING SHOCK WAS: [ ] SLIGHT [ ] MODERATE [ ] SEVERE
40. BODY ATTITUDE AT OPENING:
41. CONDITION OF CHUTE AFTER OPENING:
42. CHUTE OSCILLATION PRESENT: [ ] NONE [ ] SLIGHT [ ] MODERATE [ ] SEVERE
43. IF OSCILLATION WAS PRESENT, HOW WAS IT STOPPED?
44. WEATHER CONDITIONS DURING DESCENT (List in sequence):
45. TOPOGRAPHY OF LANDING SITE:
46. WAS BAILOUT OXYGEN CONNECTED? [ ] BEFORE EXIT [ ] AFTER EXIT [ ] NO [ ] N.A.
47. WAS BAILOUT OXYGEN USED? IF NOT, WHY: [ ] YES [ ] NO
48. WHEN WAS IT ACTIVATED? [ ] BEFORE EXIT [ ] AFTER EXIT
49. GIVE DIFFICULTIES ENCOUNTERED WITH BAILOUT OXYGEN AND THEIR CAUSE, IF ANY:
50. WAS CHUTE HARNESS: [ ] TIGHT [ ] SNUG [ ] LOOSE
51. WAS A SITTING POSITION IN SLING OBTAINED DURING DESCENT? IF NOT, WHY? [ ] NO [ ] YES [ ] NOT ATTEMPTED
52. SEAT CUSHION IF PROVIDED (Model/Type): [ ] NONE MB 51 Seat Pad (5)
53. WAS PARAPAFT LANYARD CONNECTED TO LIFE VEST D RING? IF NOT, WHY? [ ] NO [ ] YES
54. LIST TYPE OF PARACHUTE TRAINING COMPLETED BY THIS INDIVIDUAL: [ ] NONE Standard Training
55. IF ATTEMPT WAS MADE TO RELEASE PARAPAFT DURING DESCENT, WAS RELEASE ACTIVATED SUCCESSFULLY? [ ] YES [ ] NO
56. IF NO, GIVE REASON:

OTHER

57. IF G-SUIT, EXPOSURE SUIT, FULL OR PARTIAL PRESSURE SUIT WAS WORN, DID IT FIT PROPERLY? IF NOT, LIST DISCREPANCIES IN FIT AND GIVE REASONS THEREFOR: [X] YES [ ] NO
58. WAS G-SUIT EQUIPPED WITH A SPRING-LOADED DISCONNECT ADAPTER? IF NO, GIVE REASON: [X] YES [ ] NO
59. LIST ALL ITEMS OF NON-STANDARD CLOTHING OR SURVIVAL EQUIPMENT UTILIZED:
60. WAS ANY ITEM OF EQUIPMENT LOST? IF YES STATE ITEM, WHEN LOST, AND REASON FOR LOSS: [ ] NO [ ] YES
61. WAS ANY ITEM OF EQUIPMENT DISCARDED? IF YES, STATE ITEM, WHEN DISCARDED, AND REASON FOR DISCARD: [ ] NO [ ] YES

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"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAV INST 5510.6D"

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 5 OPNAV REPORT 3750-7

OPNAV FORM 3750-80 (REV. 5-58)

SECTION H - EMERGENCY EXIT FROM A/C AND SURVIVAL FACTORS

NAME OF INDIVIDUAL (Last, first, middle): PHILLIPS, Robert Paul

MODEL A/C: RF-8-A

S	E	S-SUSPECTED, E-ESTABLISHED	REMARKS
		1. EJECTION - Attempted	
		2. - Accomplished	
		3. - Through canopy	
YES	NO	EJECTION DIFFICULTIES ENCOUNTERED	IF YES, EXPLAIN DIFFICULTIES
		4. - Prior to	
		5. - During	
		6. - Subsequent to	
		7. Give type and model of seat used	
		8. BAILOUT - Attempted	
		- Accomplished	

9. ALTITUDE AT TIME OF EXIT (feet): ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

10. ATTITUDE OR MANEUVER OF A/C AT EXIT OR IMPACT: Unknown ( )

11. AIRSPEED: Unknown ( )

12. COLLISION OF A/C WITH: [X] GROUND [ ] WATER

13. CONTROLLED? [ ] YES [ ] NO [X] UNKNOWN

14. POWER: [ ] ON [ ] OFF

15. WHEELS: [ ] UP [ ] DOWN

16. FLAPS: [ ] FULL [ ] UP [ ] PARTIAL

17. CANOPY POSITION AT EXIT OR IMPACT: [ ] OPEN [ ] CLOSED [ ] JETTISONED

18. SEA STATE

19. AIR TEMP. °F

20. WATER TEMP. °F

21. A/C FLOATED SEC.

22. TIME IN WATER

23. TIME IN RAFT

BAIL OUT OR COLLISION WITH WATER OR GROUND

24. EXIT USED

25. IS THIS THE RECOMMENDED EXIT? IF NO STATE REASON FOR CHOICE. [ ] YES [ ] NO

26. DIFFICULTIES WITH THIS EXIT WERE: [ ] IN REACHING [ ] IN OPENING [ ] IN EXITING

27. STATE NATURE OF DIFFICULTY

28. BODY POSITION DURING EXIT

29. LIST OTHER FACTORS NOT INDICATED ABOVE WHICH AFFECTED EXIT FROM A/C

SURVIVAL FACTORS Check factors below which are appropriate for this accident. Prepare a detailed narrative account of the factors checked below and attach to this form. Identify each item discussed by item number (e.g., H30, H31, etc.)

COMMUNICATIONS:
- 30. Communicated position prior to mishap
- 31. Witnesses at scene
- 32. Electronic signal devices
- 33. Visual signal devices
- 34. Auditory signal devices
- 35. OTHER:

TRAVEL:
- 36. LAND
- 37. WATER

SHELTER:
- 38. Life raft
- 39. Parachute
- 40. A/C structure
- 41. Natural shelter
- 42. Man-made shelter
- 43. OTHER:

WATER SOURCE:
- 44. Desalter kit, seawater or solar still
- 45. Rain, dew, snow, ice, etc.
- 46. Processed beverages
- 47. Canteen, thermos, water breaker, etc.
- 48. Streams, ponds, wells, etc.
- 49. OTHER:

MAINTAINING BODY TEMPERATURE:
- 50. Items used as shelter
- 51. Items used as clothing
- 52. Fire
- 53. OTHER:

ENVIRONMENTAL HAZARDS:
- 54. Exposure to natural forces
- 55. Exposure to dangerous animals and plants
- 56. Unfriendly native population
- 57. OTHER:

MORALE:
- 58. Isolation
- 59. Psychological shock
- 60. Lack of motivation to survive
- 61. Boredom
- 62. Rationing, activities, and group coordination
- 63. OTHER:

FOOD SOURCE:
- 64. Prepared survival rations
- 65. Animals/plants
- 66. OTHER:

SURVIVAL TRAINING RECEIVED PRIOR TO MISHAP:
- 67.

U.S. GOVERNMENT PRINTING OFFICE: 1963-[illegible]

"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAV INST 5750.6D"

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 6 OPNAV REPORT 3750.7
OPNAV FORM 3750-8E (Rev. 9-58)

SECTION 1 - PATHOLOGICAL FACTS (Use A to denote ANTE MORTEM; P for POST MORTEM, when known and applicable)

1. NAME OF INDIVIDUAL (Last, first, middle)					MODEL A/C
PHILLIPS, Robert Paul					RF-8-A
2. AGE	3. HEIGHT	4. WEIGHT	5. LOCATION AND DIRECTION FACING AT TIME OF ACCIDENT		6. INJURY CODE
24	70 INCHES	165			A

7. UNCONSCIOUSNESS
☐ SHORT DURATION LITTLE SIGNIFICANCE ☐ OTHER (give time)

8. INTERNAL INJURIES (Non-fatal cases)

HEAD INJURIES
9. CEREBRAL CONCUSSION ☐ MINOR ☐ SERIOUS ☐ CRITICAL ☐ FATAL
10. FACIAL INJURIES (N. F. C.)
11. INTRA-ORAL INJURIES
12. MINOR EYE INJURIES ☐ RIGHT ☐ LEFT
13. MAJOR EYE INJURIES ☐ RIGHT ☐ LEFT

14. TYPE OF FRACTURE

	SKULL		VERTEBRAE (Specify No.)					SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM		LOWER ARM		HAND		UPPER LEG		LOWER LEG		FOOT	
	CRAN.	FACIAL	CERV.	DOR.	LUMBAR	SACRAL	COCCYX				R	L	R	L	R	L	R	L	R	L	R	L
SIMPLE																						
COMPOUND																						
COMMINUTED																						
DIS-LOCATION		JAW									SHOULDER		ELBOW		WRIST / HAND		HIP		KNEE		ANKLE / FOOT	

15. AMPUTATIONS/AVULSIONS (State Parts)

16. LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION

17. SOFT TISSUE INJURIES

		LACERATIONS			CONTUSIONS/SPRAIN/STRAIN			ABRASIONS		
		MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE	MILD	MODERATE	SEVERE
HEAD (N. F. C.)	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES	UPPER									
	LOWER									

18. ☐ DROWNED
19. ☐ ASPHYXIATED
20. SHOCK ☐ MILD ☐ MODERATE ☐ SEVERE
21. EXPOSURE ☐ MILD ☐ MODERATE ☐ SEVERE

22. ☐ BURNS ☐ FROST BITE

		1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD
	DEGREE									
	AREA	HEAD (ventral		Dorsal)	TRUNK (ventral		Dorsal)	ARMS		LEGS

23. EXTENT OF CARBONIZATION: ☐ NONE ☐ COMPLETE
ARE TISSUE SPECIMENS OBTAINABLE? ☐ YES ☐ NO

NOTE: Attach a detailed narrative account of injuries, cause, structures causing injury, magnitudes of force, and include whether ANTE- OR POST-MORTEM if determined. It is necessary to give as clear a picture of injury cause and sequence as possible.

24. ADMITTED TO SICK LIST? IF YES, GIVE DIAGNOSIS ☐ YES ☐ NO
25. DIAGNOSIS NO. (NAVMED P-1190)
26. ESTIMATED STAY ON SICK LIST DAYS
27. GROUNDED? IF YES GIVE REASON ☐ YES ☐ NO
28. ESTIMATED DURATION DAYS
29. PRIMARY CAUSE OF DEATH (Use Basic Diagnostic Nomenclature, NAVMED P-1190) NO. 8651
30. SECONDARY CAUSE OF DEATH NO.
31. AUTOPSY POSTPONED? ☐ YES ☐ NO
32. PROTOCOL ☐ ATTACHED ☐ WILL BE FORWARDED
33. AUTOPSY CONDUCTED BY ☐ PATHOLOGIST ☐ FLIGHT SURGEON
IF FLIGHT SURGEON GIVES AUTOPSY USE "AUTOPSY GUIDE FOR A/C ACCIDENT FATALITIES", AFIP, 1957.

34. SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD: 1			TISSUE: (CNS)		
2			MUSCLE		
3			VISCERA		
URINE			OTHER:		
G-I CONTENTS					

35. IF ULTRAVIOLET LIGHT OR OTHER SPECIALIZED PROCEDURES WERE USED AT THE MISHAP SITE OR AUTOPSY, LIST THEM IN THIS SPACE. FOR EACH ENTRY IN THIS SPACE A NARRATIVE ACCOUNT OF THEIR RESULTS AND INTERPRETATION WILL BE ATTACHED.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1962—[illegible]

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAV INST 3750.6D"

RECOMMENDATIONS TO MOR 3-63, of VFP-63

1. Because of the lack of an eyewitness to this accident, nothing definite can be stated about the flight maneuvers performed from the commencement of the spiraling descent to the crash. It is recommended that when an aircraft accident occurr in a remote area the news media be utilized to obtain possible eye witnesses.

2. No changes to the F8 NATOPS are recommended as a result of this accident.

"SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 70, OPNAV INST 3750.6D"

COMMENTS AND CONCLUSIONS to MOR 3-63, of VFP-63

1. It is concluded that:
   The flight leader performed no maneuver that could be considered dangerous or unauthorized.

2. There was no violation of the F8 NATOPS.

3. There was no evidence of material failure or malfunction.

4. Although some form of physically incapacitating attack cannot be completely ruled out, it is not thought to be probable in this case.

5. The cause of this accident is undetermined.

"SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 70, OPNAV INST 3750.6D"

Standard Form 600
Prescribed Nov. 1952
By Bureau of the Budget
Circular A-12

J-714326

HEALTH RECORD	CHRONOLOGICAL RECORD OF MEDICAL CARE

DATE	SYMPTOMS, DIAGNOSIS, TREATMENT, TREATING ORGANIZATION (Sign each entry)
	(b) (6), (b) (5) [redacted]
26 NOV 62	[redacted]
27 NOV 62	[redacted]
	(b) (6) [redacted] LT MC USN

SEX	RACE	GRADE, RATING, OR POSITION	ORGANIZATION UNIT	COMPONENT OR BRANCH	SERVICE, DEPT. OR AGENCY
M	C	LTJG		USNR	

PATIENT'S LAST NAME—FIRST NAME—MIDDLE NAME	DATE OF BIRTH (DAY-MONTH-YEAR)	IDENTIFICATION NO.
PHILLIPS, Robert Paul	26 AUG 38	(b) (6) [redacted]

CHRONOLOGICAL RECORD OF MEDICAL CARE
Standard Form 600