SPECIAL [illegible] REQUIRED

PART VII, OPNAVINST 3750.6J

AER-MA-610/68

3 JUL 1957

SEVENTH ENDORSEMENT on VF-21 AAR ser 4-56 concerning FJ-3 BUNO 136123, accident occurring 18 October 1956, pilot ROBINSON

From: Chief, Bureau of Aeronautics
To: Chief of Naval Operations
Via: Director, U.S. Naval Aviation Safety Center

Subj: Aircraft Accident Report; forwarding of

1. Forwarded in accordance with paragraph 4. of Chief of Naval Operations letter OP-574/ agf, serial 146P57, of 13 May 1957.

(b) (6)

[redacted]

By direction

FF4-1/A25
Serial:
80/1588

1 FEB 1957

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PART VII OPNAVINST 3750.6B

SIXTH ENDORSEMENT on VF-21 AAR ser 4-56 concerning FJ-3 BUNO 136123 accident occurring 18 October 1956, pilot ROBINSON

From: Commander Air Force, Pacific Fleet
To: Chief of Naval Operations (OP-57)
Via: (1) Chief, Bureau of Aeronautics (Aer-512)
(2) Director, U. S. Naval Aviation Safety Center

Subj: VF-21 AAR ser 4-56

1. Forwarded, concurring in the conclusions and recommendations of the Aircraft Accident Board as modified by the subsequent endorsements subject to the following comments.

2. The recommendation contained in paragraph 9.a. of the second endorsement regarding minimum end speed catapult launches is not concurred in. Catapulting under the present restrictions of 15-20 knots above the minimum end speed is considered adequate training.

3. The attention of CATG-181 and CO, VF-21 is invited to paragraph E.2., and F.7., Part VIII of reference (a) regarding direct distribution of the AAR and endorsements thereto.

(b) (6)
[redacted]

By direction

Copy to:
NAVAVSAFCEN (2)(Airmail)
CINCPACFLT
COMFAIRHAWAII
COMCARDIV-5
CO, USS BENNINGTON (CVA-20)
CATG-181
CO, VF-21

2

FF7-5/A25

Serial: 30/

JAN 3 - 1957

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH
PART VII OPNAV INSTRUCTION 3750.6B

FIFTH ENDORSEMENT on VF-21 AAR ser 4-56 concerning FJ-3, BuNo 136123
accident occurring 18 October 1956, pilot ROBINSON

From: Commander Fleet Air Hawaii
To: Chief of Naval Operations (OP-57)
Via: (1) Commander Air Force, U. S. Pacific Fleet
(2) Chief, Bureau of Aeronautics (AER-512)
(3) Director, U. S. Naval Aviation Safety Center

Subj: VF-21 Aircraft Accident Report 4-56

Ref: (a) OPNAV Instruction 3750.6B

1. Forwarded, concurring with the statements of the previous endorsements.

2. The following errors were noted in the report:

a. Ia17 - The type of accident is provided for in Part VIII reference (a).

b. Ia18 - The phase of flight is also provided for in Part VIII reference (a).

c. Ic3 - Wind direction and velocity should be given relative to the flight deck.

d. The basic report, first, second and fourth endorsements are not marked "Special Handling Required in Accordance With Part VII OPNAV Instruction 3750.6B".

C. C. LUCAS
Chief of Staff

Copy to:
BUAER (AER-512) (1) airmail direct
DIRNAVAVSAFCEN, NORVA (2) airmail direct
COMCARDIV-5
CATG-181
COMAIRLANT
CO, USS BENNINGTON (CVA-20)
CO, VF-21

3

COMMANDER CARRIER DIVISION FIVE
FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

FB5/CVA(30:r1)
A25
Serial: 5 8 6

DEC 26 10 31 1956

21 DEC 1956

FOURTH ENDORSEMENT on VF-21 AAR Ser 4-56 concerning FJ-3, 136123, accident occurring 18 October 1956, Pilot ROBINSON

From: Commander Carrier Division FIVE
To: Chief of Naval Operations (OP-57)
Via: (1) Commander Fleet Air Hawaii
(2) Commander Air Force, U.S. Pacific Fleet
(3) Chief, Bureau of Aeronautics
(4) Director, U.S. Naval Aviation Safety Center

Subj: VF-21 Aircraft Accident Report 4-56

1. Forwarded concurring with the conclusions and recommendations 1, 2, 4, and 5 of the Aircraft Accident Board and the recommendations in subsequent endorsements, and in particular the urgent need for a low altitude ejection seat.

M. H. TUTTLE

M. H. TUTTLE
Chief of Staff

Copy to:
NAVAVSAFCEN NORVA
BUAER
CO, USS BENNINGTON (CVA-20)
ATG-181
VF-21
COMAIRLANT

4

CVA20/A25
O4:RAK:jhm
Serial: 2864

"Special Handling Required
in Accordance with Part VII
OPNAVINST 3750.6B"

7 DEC 1956

THIRD ENDORSEMENT on VF-21 AAR ser 4-56 concerning FJ-3, 136123, accident occurring 18 Oct 1956, Pilot ROBINSON

From: Commanding Officer, USS BENNINGTON (CVA-20)
To: Chief of Naval Operations (OP-57)
Via: (1) Commander Carrier Division FIVE
(2) Commander Fleet Air Hawaii
(3) Commander Air Force, U.S. Pacific Fleet
(4) Chief, Bureau of Aeronautics
(5) Director, U.S. Naval Aviation Safety Center

Subj: VF-21 Aircraft Accident Report No. 4-56

Encl: (1) Statement of Commanding Officer, USS BENNINGTON

1. Forwarded.

2. The Commanding Officer's statement is forwarded herewith as enclosure (1).

3. The conclusions of the AAR Board; i. e., that the accident was caused primarily by partial loss of power and aggravated by pilot technique and various harmful design features of the FJ-3, are concurred in. Therefore, there is no comment on conditions or functions involving the personnel, equipment or facilities of USS BENNINGTON.

4. As indicated in the second endorsement, the accident itself sufficed to make all pilots attitude conscious on catapult launches. This has been substantiated in subsequent low-wind launchings. As to need for further action of more general application the Commanding Officer most earnestly endorses recommendations 1, 2, 4, and 5 of the AAR Board, plus all recommendations in the first and second endorsements thereto.

Robert E. C. Jones
ROBERT E. C. JONES

Copy to: (With enclosure)
NAVAVSAFCEN NORVA (2)
BUAER (Direct)
ATG-181
VF-21
COMAIRLANT

5

STATEMENT OF COMMANDING OFFICER, USS BENNINGTON (CVA-20)

The fatal crash herein reported was observed by Commanding Officer, USS BENNINGTON. This being the first launch in preparation for the Operational Readiness Inspection, more than the normal number of persons were topside to observe. (b) (5) [redacted] (b) (5) [redacted] As the plane became airborne it nosed up to a degree. Immediately the pilot pushed over, losing altitude but not a critical amount. The bow of the carrier was 52 to 53 feet above water. A second "rotation", that is pull up and push over, lost more altitude at which point the pilot pulled up a third time prior to impact. (b) (5) [redacted] (b) (5) [redacted] The noise level was such that this could not be determined. (b) (5) [redacted] (b) (5) [redacted] (b) (5) [redacted] In any case elements of a progressive stall were observed.

The crash occurred well in excess of 230 yards from the bow (objects on water are not visible 657 feet from bridge). Speed of the ship at this instant was 27 knots or 2700 feet per minute. Right rudder was ordered to swing the stern clear. Abeam the bridge (25 seconds after crash) the aircraft was seen underwater nosing down at a depth estimated at 15-20 feet. On the surface were the crash helmet and one or two wing tip tanks, with (at that instant) sputtering flames from spread fuel. The helicopter was over this very shortly after the ship passed, with line and rescue belt extended to just above water. The plane guard destroyer promptly stopped in the same area. After passing clear, the carrier shifted rudder and swung through 270°, passing astern of the stopped DD. The plane guard put over a whale boat to search and recovered the crash helmet. Continued search by both ships, the whale boat and the helicopter was negative.

ROBERT E. C. JONES

6

ENCLOSURE (1)

ORIGINAL

FF12/CATG-181
A25(4)/RLW/lud
Serial: 129
10 November 1956

SECOND ENDORSEMENT on VF-21 AAR Number 4-56 of 18 October 1956

From: Commander Air Task Group ONE EIGHTY ONE
To: Chief of Naval Operations (Op-57)
Via: (1) Commanding Officer, U.S.S. BENNINGTON (CVA-20)
(2) Commander, Carrier Division FIVE
(3) Commander Fleet Air Hawaii
(4) Commander Air Force, U. S. Pacific Fleet
(5) Chief, Bureau of Aeronautics
(6) Director, U.S. Naval Aviation Safety Center

Subj: VF-21 Aircraft Accident Report Number 4-56

1. Forwarded, concurring with the conclusions and recommendations of the accident board and the first endorsement subject to the following remarks.

2. The Commander Air Task Group ONE EIGHTY ONE observed this accident from the bridge. This endorsement will reflect what was observed personally in addition to comments concerning the conclusions and recommendations of the accident board and the first endorsement.

3. Statement:

a. The start of FJ-3 bureau number 136123 from observing the tail pipe seemed normal in all respects. I then discussed the wind over the deck (32 knots) with the Commanding Officer, U.S.S. BENNINGTON (CVA-20) and told him it was satisfactory for the state of training of FJ-3 and F2H-3 pilots of the Air Group. At the turn-up signal, I closely observed the aircraft and everything sounded normal. As the aircraft left the catapult, the pilot rotated to a nose high position gaining a few feet. The plane immediately nosed over losing altitude but again almost immediately rotated to a nose high attitude continuing to lose altitude. Then the nose of the plane dropped and seemed to maintain that attitude until striking the water.

b. In analyzing my observation, I became aware that I believed the pilot to be in trouble when he rotated the first time and I concluded that I had realized from watching hundreds of other catapult shots that his speed after rotation seemed very slow and the plane was reacting like a plane at stall speed. At the nose over and then the sudden rotation back to nose high, I first had the impression that the pilot was over controlling.

c. As to the statement and theory contained in the accident report that the aircraft had partial or complete loss of power, my observation point was such that I could hear nothing of the engine after the catapulted aircraft once commenced its travel. To me it looked like a case of over rotation for a minimum end speed catapult launch.

7

ORIGINAL

ORIGINAL

FF12/CATG-181
A25(4)/RLW/lad
Serial: 129
10 November 1956

4. The Commander Air Task Group ONE EIGHTY ONE feels that one of the most important points in this accident was not amplified sufficiently to show the cause for the pilot's apparent over rotation. After the accident, the Air Group Commander in reviewing his observation of most catapult launches since embarking in the U.S.S. BENNINGTON, recalled that all jet squadrons were rotating sharply when coming off the catapults. (Previous launches had winds in excess of 40 knots). In analyzing this particular practice it was realized that all jet pilots in Air Task Group ONE EIGHTY ONE were products of the steam catapults of the U.S.S. FORRESTAL (CVA-59). In reviewing the operations aboard the FORRESTAL, it was realized that the catapult end speed was usually in excess of 140 knots regardless of wind over the deck. Only a few pilots of VF-21, VF-41 and VF-174 have ever had a minimum end speed catapult launch in the type aircraft they are now flying. End speeds in excess of 140 knots in the FJ-3 causes a pilot to rotate nose up in order to hold down the acceleration until the wheels and flaps are up. This is one of the operational techniques which pilots have acquired through operation of steam catapults and high end speeds.

5. It is believed that this accident effectively brought to the attention of all pilots the importance of observing catapult minimum air speed techniques. It is to be noted that after this accident, regardless of the amount of wind, all jet pilots of this Air Task Group are now attitude conscious coming off the catapult and do not rotate until they can ascertain the air speed.

6. An apparent discrepancy has been noted in that the accident board recommended that the pilot should have dropped his external tanks, and the information in paragraph 6.e. of the first endorsement where the Flight Handbook is quoted as saying "satisfactory separation of external tanks cannot be accomplished at air speeds below 200 knots". The following interpretation was arrived at after further study:

a. It is now believed that the tanks can be dropped at any air speed after becoming airborne, however, to have a satisfactory clean drop the aircraft speed must be 200 knots or more. High angle of attack, low speed release of the external tanks would cause them to roll up and along the wings, causing probable damage to the wings. If this be the case, then a cartridge type ejection release is required to assure safe release at all air speeds. Squadron emergency procedure remains the same which is to release the external tanks which should reduce stalling speed by approximately 11 knots. The Bureau of Aeronautics should clarify the pilots handbook on this point.

7. The morale of VF-21 is particularly high in spite of the past record of FJ-3 water landings, in which few instances of pilot survival have been recorded. All pilots like to think that it can never happen to them, but there is some doubt in the Air Group Commanders mind as to how long this philosophy can last if several more pilots fail to survive after making water landings. It is recommended that an immediate project be initiated for a better method of securing pilots in the FJ-3 cockpit during carrier operations and emergency landings.

8

ORIGINAL

ORIGINAL

FF12/CATG-181
A25(4)/RLW/lud
Serial: 129
10 November 1956

8. In view of the poor ditching characteristics discussed above, pilots of FJ-3 squadrons are also beginning to realize that any engine failure at low altitude (carrier approach) which would result in ditching, the pilot would have little chance of survival. This makes mandatory a low altitude ejection seat such as the British have developed. The immediate need for such an ejection seat in all high performance aircraft cannot be over stressed.

9. Recommendations.

a. Pilots qualifying on a steam catapult for deployment on an H8 equipped carrier be given several minimum end-speed catapult launches.

b. A low altitude ejection seat be developed for all Navy jet aircraft.

c. A better method of securing the pilot in an FJ-3 be designed and installed without delay.

d. The Bureau of Aeronautics clarify the results of dropping external tanks at all air speeds for the FJ-3.

R. L. Werner

R. L. WERNER

Copy to:
COMAIRLANT
CO VF-21

ORIGINAL

FIGHTER SQUADRON TWENTY ONE
% Fleet Post Office
San Francisco, Calif

FF12/VF21
CO:WMN:hw
A25
Serial: 311

1 NOV 1956

FIRST ENDORSEMENT on VF-21 AAR

From: Commanding Officer, Fighter Squadron TWENTY ONE
To: Chief of Naval Operations (OP-57)
Via: (1) Commander Air Task Group ONE EIGHT ONE
(2) Commanding Officer, USS BENNINGTON (CVA-20)
(3) Commander Carrier Division FIVE
(4) Commander Fleet Air HAWAII
(5) Commander Air Force, U.S. Pacific
(6) Chief, Bureau of Aeronautics (AER 512)

1. Forwarded, concuring with the conclusions and recommendations of the accident board, subject to the remarks below.

2. LT ROBINSON was a capable pilot with more than average experience in swept wing jet fighter carrier operations, having flown the F9F6 during the deployment of Fighter Squadron TWENTY ONE to the Mediterranean from December 1954 to June 1955 and having two and one half months experience in the FJ-3 aboard USS FORRESTAL. He was a graduate of the Aviation Safety School at the University of Southern California and was very safety conscious. He had exhibited in the past a slight tendency to "freeze" in emergency situations, although not to an abnormal extent. He was well versed in the characteristics of the FJ-3 having personally conducted an intensive and outstanding safety program while Safety Officer of this command.

3. Statements by well qualified, senior observers of this accident have not been included by the accident board. It is believed that they will be reflected in the forwarding endorsements by the Air Group Commander and Commanding Officer, USS BENNINGTON (CVA-20).

4. (b) (5) [redacted]
(b) (5) on 9 October 1956 following refueling and hoisting aboard at U.S. Naval Air Station, North Island, very small particles of a black graphite type contamination were drained from the after fuselage tank. This contamination was not detected at any other location in this aircraft, and subsequent trouble was not experienced.
(b) (5) [redacted]

5. An automatic landing gear retraction device is not believed to be desirable. The additional weight and complexity is not believed to be justified by the possible gains, nor is it certain that its reliability would be such that it would prevent or lessen the severity of more accidents aboard ships than it might cause ashore.

ORIGINAL

6. The following observations are made:

a. In view of the Medical Officer's statement, enclosure [redacted] (b) (5) (b) (5) (b) (5) (b) (5) This is further evidenced by the fatal injuries sustained by a pilot of Fighter Squadron EIGHTY FOUR when he ditched an FJ-3 and his head struck the control stick with great violence. This command is not aware of a successful ditching of the FJ-3 aircraft.

b. In view of the strong possibility of the explosion of a jet engine when it suddenly comes in contact with the water, it is believed that even more intensive efforts must be made to obtain quickly an ejection seat-parachute combination which can be used at very low altitudes. It is understood that such is under development, but it is believed that renewed efforts and funds must be expended to make such devices available to the fleet. The need will probably be as great or greater in newer aircraft powered by higher performance, afterburner equipped engines.

c. The loss of the H-5 Helmet from the pilots head is of great concern to the pilots of this command. It must be possible to fasten a helmet such that it will not come off accidentally.

d. (b) (5) [redacted] (b) (5) (b) (5) (b) (5) The landing light switch is being covered in the aircraft of this command.

e. The Flight Handbook for the FJ-3, revision number 13, states that satisfactory separation of external tanks can not be accomplished at air speeds below 200 knots. This is of particular concern since the desirability of dropping full external tanks under the conditions covered by this accident is obvious and is called for in the emergency section of the Flight Handbook. It is believed that provisions should be incorporated in the FJ-3 to permit reliable separation of tanks at all speeds above 115 knots.

7. In view of the above it is recommended that:

a. Improvements be made to the method of securing the pilot in the seat.

b. An ejection seat-parachute combination usuable at very low altitude be developed, procured, and furnished to the fleet for all "non-ditchable" aircraft.

11

FF12/VF-21
CO:WMH:hw
A25

c. The security of fastening of the H-5 helmets be investigated and improvements be made if the results of said investigation indicate that such is needed.

d. The landing light switch be relocated.

e. Provisions be incorporated in the FJ-3 for reliable low speed external fuel tank separation.

W M Harnish

W. M. HARNISH

Copy to:
CINCPACFLT
AVSAFCEN, NORVA
COMAIRPAC
BAR COLUMBUS
COMAIRLANT

S 1

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (REV. 11-55)
PAGE 1

See instructions for completion prior to filling out

ORIGINAL

OPNAV REPORT 3750-1

PART I – GENERAL

1. AIRCRAFT ACCIDENT BOARD CONVENED BY: FITRON 21
2. DATE OF ACCIDENT: 18 OCT 1956 TIME: 1610 W
3. AAR SERIAL NO.: 4-56
4. TO: CHIEF OF NAVAL OPERATIONS (Op-57)
5. ENCLOSURES: (1) PHOTOGRAPHS (A-H)
(2) Catapult Officer
(3) Assistant Catapult Officer
(4) Catapult Chief Petty Officer
(5) Witnesses (A-F)
(6) Helicopter Pilot
(7) Maintenance Officer
(8) Medical Officer
(9) Aerological Officer
6. VIA: (1) CATG 181
(2) USS BENNINGTON
(3) COMCARDIV 5
(4) COMFAIR HAWAII
(5) COMAIRPAC
(6) Bureau of Aeronautics
(LAST) DIRECTOR, U. S. NAV. AV. SAFETY CENTER
7. REPORTING CUSTODIAN (if different than item number 1): FITRON 21
8. ACTIVITY OPERATING AIRCRAFT (if different than item 7): Same
9. KIND OF FLT.: 1A6
10. TIME OF DAY: ☐ DAWN ☒ DAY ☐ DUSK ☐ NIGHT
11. LOCATION OF ACCIDENT: 120° - 42'W 157°-47'W
12. ELEV. ABOVE SEA LEVEL: S.L.
13. PLACE OF LAST TAKE-OFF: USS BENNINGTON
14. CLEARED FROM LOCAL VFR TO
15. TYPE CLEARANCE: ☐ IFR ☒ VFR ☒ LOCAL ☐ OPERATIONAL ☐ AIRWAYS ☐ DIRECT ☐ OTHER (specify)
16. TIME IN FLT.: 0 + 01
17. TYPE ACCIDENT: FATAL D-1
18. PHASE OF FLIGHT: CATAPULT SHOT

AIRCRAFT

19. MODEL	20. SERIAL NO.	21. DAMAGE TO AIRCRAFT	22. DOL. COST	23. AIRSPEED (kts)	24. A/C WT.
FJ-3	136123	☒ A. ☐ B. ☐ C. ☐ D.	384,000	115 KTS	20000LBS

25. LIST MODEL, SER. NRS, REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (complete separate OPNAV Form 3750-1 for each A/C): NONE

PILOT AND CO-PILOT

1. PERSONNEL	2. NAME (last, first and middle initial)	3. RANK RATE	4. FILE SERV. NO.	5. DESIGNATOR	6. DATE DESIGNATED	7. DATE OF BIRTH	AGE
PILOT (PERSON AT CONTROLS AT TIME OF ACCIDENT)	ROBINSON Jackson Roy	LT	(b) (6)	1310	28 APRIL 49	(b) (6)	33
CO-PILOT	NONE						

8. PERSONNEL	9. OPERATIONAL FLT. TRAINER AVAILABLE?	USED?	10. UNIT TO WHICH ATTACHED	11. TYPE INSTRUMENT CARD
PILOT	☐ YES ☒ NO	☐ YES ☒ NO	FITRON 21	☒ STANDARD ☐ SPECIAL
CO-PILOT	☐ YES ☐ NO	☐ YES ☐ NO		☐ STANDARD ☐ SPECIAL

12. PILOT, CO-PILOT, STUDENT EXP.

TOTAL PILOT HOURS

ITEM	PILOT	CO-PILOT	STUDENT	ITEM	PILOT	CO-PILOT	STUDENT
ALL MODELS	2781	N/A	N/A	CV LANDINGS DAY/NIGHT	184	0	
ALL MODELS IN LAST 12 MOS.	264.4 ~~253~~	6.3	0	FCLP LANDINGS DAY/NIGHT	463	0	
ALL MODELS IN LAST 3 MOS.	68.9 ~~61~~	0	0	INSTRUMENT HOURS, LAST 3 MONTHS	2.3	0	
ALL SERIES THIS MODEL	245.3 ~~236~~	0	0	NIGHT HOURS, LAST 3 MOS.	12.2	0	
ALL SERIES THIS MODEL, LAST 12 MONTHS	234.1 ~~240~~	0	0	(jet accidents only) TOTAL JET PILOT HOURS	524	0	
ALL SERIES THIS MODEL, LAST 3 MONTHS	68.9 ~~61~~	0	0	DATE LAST FLIGHT, ALL SERIES THIS MODEL	7 October 56		
				DURATION LAST FLIGHT, ALL SERIES THIS MODEL	1.6		

13. ALL PERSONNEL

	NAME (last, first and middle initial)	RANK RATE	FILE SERVICE NO.	ORG. TO WHICH ATTACHED	INJURY CODE	BILLET POSITION
1.	ROBINSON JACKSON ROY	LT	(b) (6)	FITRON 21	A	PILOT - COCKPIT
2.						
3.						
4.						
5.						

13

(if additional space is necessary, attach additional sheet(s))

ORIGINAL

OPNAV FORM 3750-1 (REV. 11-55)
PAGE 2

AIRCRAFT ACCIDENT REPORT

OPNAV REPORT 3750-

1. CEILING	2. VISIBILITY	3. WIND DIRECTION AND VELOCITY	4. TEMPERATURE	OUTSIDE AIR	RUNWAY	5. DEW POINT	6. ALTIMETER SETTINGS
NONE	15	220°/6 KTS		79°	79°	73	29.99

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

SEA STATE 3

ITEM	P	S	ITEM	P	S	ITEM	P	S
PILOT ERROR		X	LANDING SIGNAL OFFICER ERROR			MATERIAL FAILURE OR MALFUNCTION		X
CREW ERROR			OTHER PERSONNEL ERROR, Specify			MATERIAL INADEQUACY		
SUPERVISORY PERSONNEL ERROR			ADMINISTRATIVE ERROR			ROLLING AND PITCHING DECK/ROUGH SEAS		
MAINTENANCE PERSONNEL ERROR			AIRPORT OR CARRIER FACILITIES			UNDETERMINED		
SERVICING PERSONNEL ERROR			WEATHER			OTHER, Specify		

FOR ACCIDENTS ABOARD DEPLOYED CARRIERS *(Complete following Section on Pilot)*

1. DATE DEPLOYED	2. DAY-HOURS/LANDINGS LOGGED SINCE DEPLOYED	3. DAY-HOURS/LANDINGS LOGGED LAST 30 DAYS
12 OCT 1956	0	8.4 / 6
4. INSTRUMENT HRS. LOGGED SINCE DEPLOYMENT	**5. NIGHT-HOURS/LANDINGS LOGGED SINCE DEPLOYED**	**6. NIGHT-HOURS/LANDINGS LOGGED LAST 30 DAYS**
0	0	0/0

PART II – MAINTENANCE, MATERIAL AND FACILITIES DATA

1. AIRCRAFT 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 HRS. SINCE LAST CHECK	NO. OF DAYS SINCE LAST CHECK
	29 NOV 55	1	8	0	0	502.5	1st Inter 19.2		36
2. ENGINE HISTORY		ENGINE MODEL	SERIAL NO. OF ENGINE						
NO. 1	12 Dec55	J65-W 4B	W61084	0	0	197.8	1st INTER 19.2		36
NO. 2									
NO. 3									
NO. 4									

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

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

C. CHECK IF APPLICABLE: ☐ AMP FUR SERIAL

D. HAS DIR BEEN REQUESTED? ☐ YES ☒ NO

E. FAILED COMPONENTS INVOLVED: UNKNOWN

CHECK BELOW ITEMS PRESENT IN THIS ACCIDENT

a. ☐ AIRCRAFT DESIGN
b. ☐ AIRCRAFT EQUIPMENT
c. ☐ MAINTENANCE
d. ☒ UNDETERMINED
e. ☐ TECHNICAL INSTRUCTION
f. ☐ OTHER, Specify
g. ☐ SURFACE FACILITIES
h. ☐ HUMAN ENGINEERING (e.g. cockpit configurations)

A. ALTITUDE AT MALFUNCTION	B. AIR SPEED (kts)	C. OPERATING TEMPERATURE	D. WEIGHT OF AIRCRAFT	E. C.G. (% MAC)	F. KIND OF FUEL	G. FUEL PRESSURE
60 FT Stall	125	assumed normal	20000 lbs	27.2%	JP-5	Assumed Normal

H. EVIDENCE OF FUEL CONTAMINATION: NONE

I. CAUSE OF ENGINE FAILURE OR FLAMEOUT: UNKNOWN

J. FUEL CONTROL REGULATOR/CARBURETOR *(List Stock and Ser. nos., give time since new or overhauled)*: R85-[illegible]PD-190544-2 / 506702 / 149.2Hrs

K. EXTERNAL STORES ABOARD A/C: 2/200 GAL TANKS

(if additional space is necessary, attach additional sheet(s))

14

AIRCRAFT ACCIDENT REPORT

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

SECTION B – FACILITIES DATA

1. GEN. (CK. BASIC FACILITIES INVOLVED, DESCRIBE EFFECT ON ACCIDENT IN THE ANALYSIS SECTION)

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

2. SHIPS DATA

a. EQUIPMENT INVOLVED	B. PRESSURE SETTINGS	C. WIND OVER DECK	D. RELATIVE HEADWIND	E. APPROACH SPEED (SPN-12 READING)
☒ CATAPULT ☐ ARRESTING GEAR	3200PSI	32 KTS	32 KTS	–

F. MARK NUMBER	G. MODEL NO.	H. LOCATION ON SHIP	I. LAUNCHING BRIDLE AND CONFIGURATION USED
TYPE H-8	H365	STBD	Pendant NAF 314261-1 (note 1)

J. CATAPULT/ARRESTING GEAR BULLETINS OR NOMOGRAMS USED

Aircraft launching bulletin 5-27

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.

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

PART III – REMARKS (continue on separate pages if necessary)

PART	SECTION	ITEM	
11	B	26	1. With arrester installed in accordance with NAF 316089-1

15

PART IV – SIGNATURES (INDICATE DATE SUBMITTED TO C.O.) 31 Oct 56

LCDR, D.D. [illegible] EXECUTIVE OFFICER — UNIT BILLET

LT. (b) (6) USN (b) (6) OPERATIONS OFFICER (member) — UNIT BILLET

LT- (b) (6) USNR (flight surgeon member)

LTJG (b) (6) USNR SAFETY OFFICER (member) — UNIT BILLET

The Accident

At 1610W on 18 October 1956 while at sea on the USS BENNINGTON, LT ROBINSON departed on a routine air to air gunnery flight. He was the pilot of FJ-3 Buno. 136123. After being started on the Starboard Catapult, tension was taken on the catapult, and clearance for a full power turn up was given by the catapult officer. LT ROBINSON acknowledged the full power turn up by giving the standard "ready to go in all respects" signal. The catapult officer lowered his arm for the launch and FJ-3 Buno 136123 began its take off run. From statements and facts produced by the catapult officer the catapult stroke was normal in all respects. Witnesses have stated they heard the aircraft engine decelerate during the initial movement of the aircraft.

When the aircraft reached the end of the catapult track, it was in a normal flight attitude. This was followed by a nose high attitude, and from the nose high attitude the aircraft changed to an abrupt nose down attitude. This was then followed, once again, by a nose high attitude. The aircraft struck the water, wings level, flaps down, wheels down and canopy closed. The aircraft sank, and, as it did, fuel on the surface of the sea caught fire. The pilot was not recovered.

DAMAGE TO THE AIRCRAFT:

The Aircraft was not recovered. Visible wreckage included the pilots H-5 helmet, which was recovered, and 2 external fuel tanks, which were not recovered.

THE INVESTIGATION

The investigation of the accident was commenced immediately, and from enclosures 1-9 the following was revealed:

1. LT ROBINSON manned FJ-3 Bu no 136123 at 1550 on 18 October 1956 for a scheduled Air To Air Gunnery flight, from the USS Bennington (CVA-20).

2. The aircraft was spotted on the starboard catapult. After starting the aircraft the pilot conducted the manual fuel check and alternate flight control check as stated in enclosure 5-c. The aircraft was then properly tensioned on the catapult as shown in enclosure (2).

3. After receiving the turn up signal the pilot applied full power and indicated by a hand salute to the catapult officer that he was ready in all respects to be launched. The catapult officer gave the signal, and the catapult was fired. The catapult officer and assistant catapult officer statements, enclosures (2) and (3), state that the pilot appeared in all respects ready to go, and that he had previously checked all his instruments and had positioned himself in the seat with his head back before giving the "ready" signal.

4. The catapult, type H-8, functioned properly as shown in enclosure (2) and (4). The aircraft weighed approximately 20,000 lbs at the time of the launch. The catapult pressure was set at 3200 PSI with the wind over the deck determined to be 32 knots. The shuttle end speed indicator was not operating at the time of the launch, and as a result the end speed of the aircraft was not recorded, but was estimated by wind over the deck, catapult pressure, and aircraft weight. The calculated Indicated Air Speed of the aircraft upon leaving the catapult was 128 to 130 knots.

5. The pilot had been thoroughly instructed on shipboard catapult launching and emergency procedures 3 days prior to the accident. Emergency procedure knee pad cards were issued on the day before the accident. Squadron doctrine dictates the following and these were complied with by LT ROBINSON:

A. Conduct alternate flight control check and return to normal flight control (enclosure 5-c.

B. Conduct Mannual Fuel Control check (enclosure 5-c.

C. Conduct complete pre take off check list (assumed as per enclosure (2)).

D. Upon signal from the catapult Officer conduct final turn up for take off (enclosure (2) and (3)).

E. Keep head back on head rest (enclosure (2)).

F. Throttle friction tight and throttle held full forward (UNKNOWN)

G. Signify acceptance of aircraft and its status by hand salute (enclosure (2) and (3).

Squadron Doctrine further dictates that:

A. After take off make clearing turn.

B. Raise gear as soon as possible, but concentrate on flying the aircraft.

C. In event of emergency, drop external tanks and raise landing gear if possible.

D. In event of engine failure immediately switch to manual fuel control.

E. Land straight ahead if engine failure occurs.

6. During this particular launch the pilot elected to take off with his canopy closed, in accordance with squadron doctrine. Recent FJ-3 water landings in the Atlantic Fleet with the canopy open have resulted in fatalities that occured when the canopy was known to be open upon landing. But when the aircraft were recovered the canopy was only partially open. The squadron doctrine is that canopy position of the FJ-3 for both catapult and arrested landing shall be optional.

7. On the signal from the catapult officer the catapult was fired. Shuttle travel was normal in all respects as shown in enclosure (2) and (4). Enclosures (3), (4), (5b), (5d), and (5f) state that the aircraft engine definitely decelerated immediately on the initial acceleration of the catapult. It cannot be positively determined whether the engine decelerated as a result of engine malfunction or inadvertant throttle retraction by the pilot. The following factors were considered in regard to mechanical deceleration of the engine:

1. Manual fuel shut off closing.

2. Fuel Control.

A. Failure of the regulator valve causing by pass of fuel.

B. On switch over to the manual fuel system-partial opening of the Emergency fuel transfer valve.

C. Failure of the by pass valve.

D. Failure of the high pressure relief valve.

E. Pressurizing check valve failure reducing fuel flow to the engine.

F. Failure of fuel cutoff valve linkage.

G. Closing governor valve.

H. Failure of the governor head generating weights.

I. Failure of the throttle linkage.

J. Failure of the governor operating spring.

K. Engine drive Boost pump failure-sheared drive shaft.

L. Possible disconnection of the manual fuel shut off linkage.

It cannot be confirmed that the engine regained full power before becoming air borne at the end of the catapult track.

8. When the aircraft reached the end of the catapult track the pendant disengaged from the aircraft and the aircraft started a normal rotation, but appeared to slightly over rotate. The aircraft was then observed to abruptly change from a nose high attitude to a nose low attitude and it settled. After traveling a total distance of approximately 400 feet in front of the ship, the aircraft was observed to return abruptly to a nose high attitude enter a stall condition and come in contact with the water approximately 600 feet in front of the ship at an estimated indicated air speed of 115 knots. The landing gear was down, flaps were down, and the external tanks were not dropped. (enclosure 1A and 1B.) The impact speed was estimated from the known stall speed in the landing configuration, power on, and gross weight of 20,000 pounds. The angle of impact was estimated at 20°. Immediately upon striking the water with landing gear down, flaps down, and canopy closed, the nose of the aircraft rotated left about its vertical axis approximately 45°. It broke up with explosive force and came to a complete stop in approximately 30 feet. The external fuel tanks came off immediately and split open, dumping fuel in the vicinity of the entry into the water. Fire from some source in the aircraft, presumably from engine disintegration, ignited the fuel, which burned for 7 to 10 minutes.

9. The external tanks sank after remaining afloat for only a short time and the pilot's H-5 helmet was the only item recovered.

10. Enclosure 8 sets forth the opinion of the medical officer as to the cause of death.

THE ANALYSIS:

BASED upon the investigation the following analysis was formulated.

1. LT ROBINSON was properly briefed and had sufficient recent experience in type to accomplish the flight. He manned his aircraft and conducted adequate checks, in accordance with squadron doctrine, to determine that the aircraft was acceptable for flight.

2. He further indicated this to the catapult officer and the catapult officer accomplished his part of the launch in a normal manner. LT ROBINSON gave the proper signals and the procedure was normal up to the time the aircraft commenced moving.

3. Engine power decelerated immediately as the aircraft commenced moving. This could have resulted from engine malfunction due either from mechanical failure of the engine and fuel control or pilot induced retraction of the throttle as a result of catapult acceleration.

4. Had pilot induced throttle movement been the case, he was either not prepared for the launch or his throttle was not locked full forward. Regardless of the situation the force on the initial acceleration would have been great enough to retard the throttle, LT ROBINSON'S experince with H-8 catapults tends to discount this. He had approximately 70 catapult launches using the H-8. The most recent being 17 months prior to this launch. His most recent experience was with steam catapult launches but he had briefed the squadron and been briefed on the difference between the two. Had he retarded the throttle, full throttle could have been reapplied prior to impact with the water. He was anticipating the initial jolt of the catapult and it is felt he was prepared for it. Had LT ROBINSON over rotated, and had he been flying on the wrong side of the lift curve after the launch, high power would have been required to go the distance he did. This would also have been evidenced by heavy jet wash on the water from the aircraft due to the high angle of attack it was in. No jet wash was seen on the water before contact. Of the two loss of thrust possibilities in paragraph 3 above, pilot induced loss of thrust appears the more unlikely of the two.

5. Had there been an engine malfunction, total or partial loss of thrust was possible. Engine malfunction could result from lack of fuel either from the fuel shut off valve, the fuel control or the parting of throttle linkage couplings. A possible engine malfunction is supported by the fact that:

A. There was a loss of power during the launch.

B. Full power was never regained after the launch.

C. Some power was avviliable in order to fly from launching to the point of impact.

Had the engine failed in primary fuel control on take off, presumably he would have switched to manual fuel control, as briefed in squadron procedures. No tell-tale "blurp" or fire from the tail pipe was heard or seen during the launch and succeeding brief flight to indicate this switch over. Had a failure of a fuel control item occured it is possible that this would affect both the primary and manual fuel systems. These items and possibilities were considered and because no positive means of identifying which one might have happened, they were considered collectively as a possible partial failure. It is further considered that had some portion of the primary fuel system failed a pilot could inadvertently select the landing light switch instead of the fuel control selector switch, if he were acting under extreme duress.

6. After the catapult launch the aircraft became airborne, rotated to a nose high attitude, possibly to a partial stall condition, nosed over again, returned to a nose high attitude and settled into the water. The wheels remained down and external tanks attached until the aircraft struck the water. Striking the water in this condition undoubtably increased the severity of impact. The flight path of the aircraft was due to the inability to maintain adequate power. Failure to accomplish proper emergency procedure may have been due to personnel factors as discussed in enclosure 8. This could well be further argumented by the fact that the pilot had not flown in 11 days.

7. The possibility of elevator control failure is considered, but is over ruled by the fact that up and down elevator was available after the launch and further that these control movements were used in the correct sequence to correct for nose high and low attitudes.

8. Enclosure (9) states that LT ROBINSON had reported feeling that he was catching a cold and further that he had:

A. 5 hours sleep the night before

B. Indulged in several drinks containing alchol the night before.

C. Been taking medication in the form of APC pills.

It was known that LT ROBINSON had been on liberty the previous evening and that he had not over indulged in alcoholic beverages. Item C was not known prior to the accident. These cannot be held out from consideration as to possibly affecting LT ROBINSON's actions in an emergency.

Conclusions and Recommendations

It is concluded that,

1. The pilot was physically and mentally capable of conducting the flight.

2. The primary cause of this accident is partial power failure, which occured during the initial catapult acceleration.

3. The exact cause of the partial power failure cannot be determined.

4. It is improbable that a pilot can survive ditching an FJ3.

5. Failure to raise the landing gear and drop the external fuel tanks contributed to the severity of the crash.

6. Abrupt pilot accuated control movements further increased the severity of the situation.

It is recommended that:

1. The FJ never be intentionally ditched.

2. The landing gear be retracted immediatly upon being catapulted.

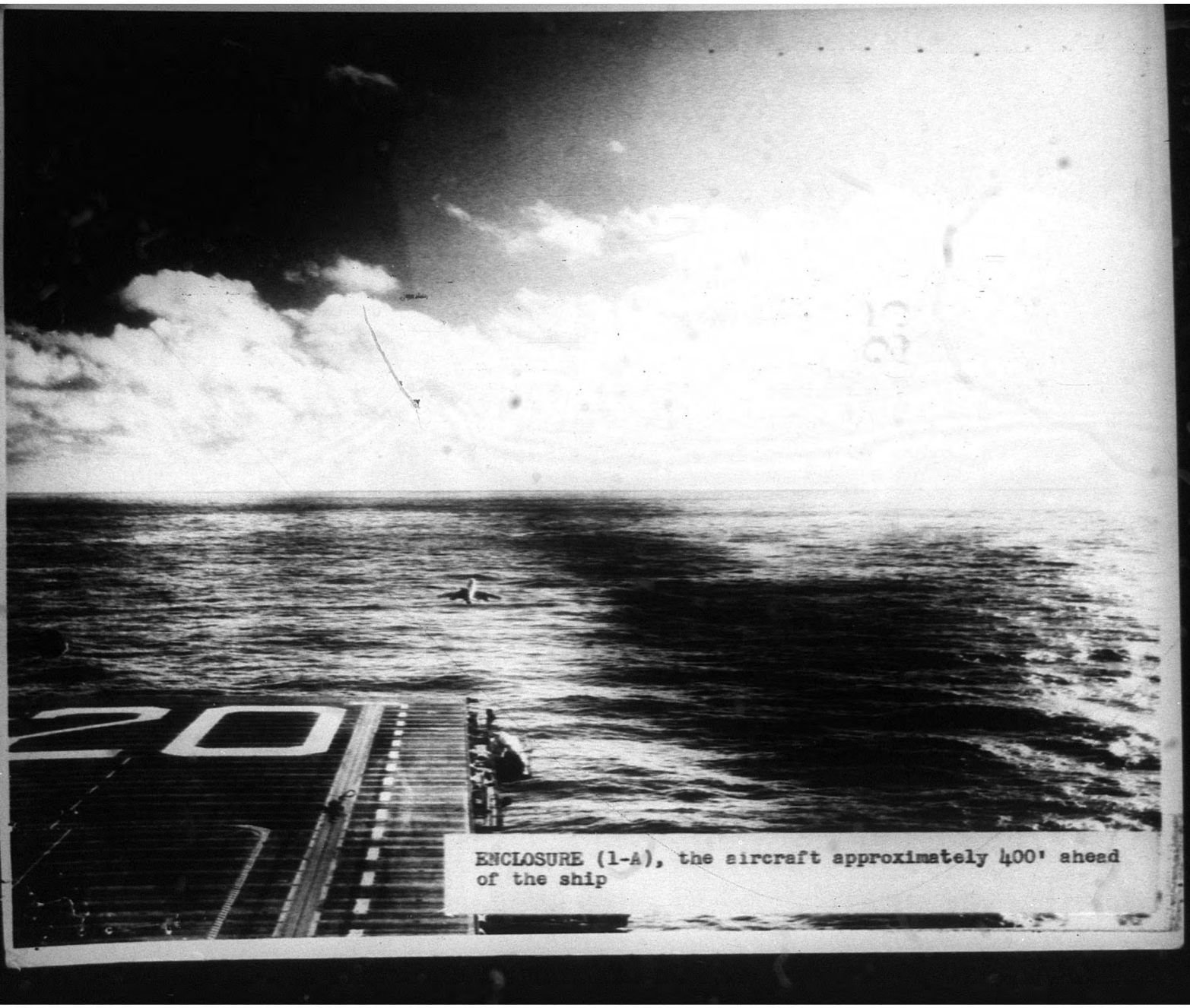
3. Investigation be made into a means of automatic landing gear retraction after catapulting, to lessen the danger of high drag at a critical point on aircraft.

4. Ditching qualities be considired when choosing aircraft for ship board operations, and these qualities be improved, if need be, provided no loss of performance is involved.

5. Low speed handling qualities of aircraft be continuously reviewed by squadron pilots

6. The station for the plane guard helicopter be moved farther forward during the launch in order to be nearer the place of possible ditching.

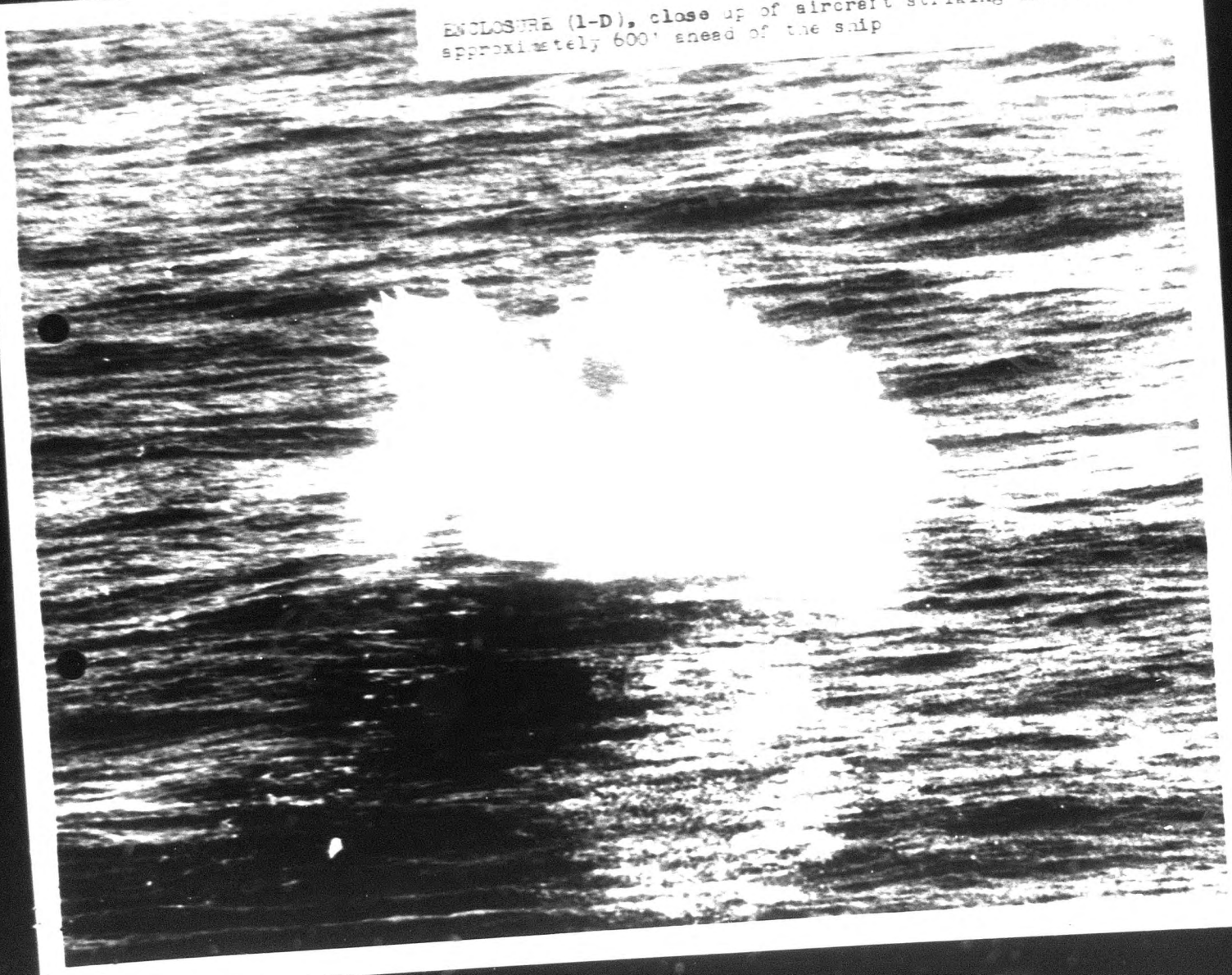
7. Qualified "frog men" be stationed in plane guard helicoptors to assist in underwater rescues.



ENCLOSURE (1-A), the aircraft approximately 400' ahead of the ship

ENCLOSURE (1-B), close up of the aircraft approximately 400' ahead of the ship

ENCLOSURE (1-C), aircraft striking the water approximately 600' ahead of ship



ENCLOSURE (1-D), close up of aircraft striking the water approximately 600' ahead of the ship

ENCLOSURE (1-E), aircraft breaking up in the water

ENCLOSURE (1-F), close up of aircraft breaking up in the water

ENCLOSURE (1-B), Close up of aircraft breaking up in the water

ENCLOSURE (1-H), wreckage as seen from the stbd catwalk

ENCLOSURE (2)

STATEMENT OF LT (b) (6) [redacted] USN, CATAPULT OFFICER

LT ROBINSON on side number 204 turned up his plane, went thorough preliminary checks and gave me a thumbs up signal at about two minutes prior to launch time. I also recieved a thumbs up from the senior plane checker. The fly one talker reported 32 knots across the deck (The minimum wind for catapulting was 25 knots.). At thirty seconds prior to launch I signalled the director to take tension, which he did. The director then passed the control of the aircraft to me and I started giving a two finger turn up. The pilot added full throttle and appeared to look over the complete instrument panel. Primary fly signalled a white flag. The pilot continued to check his instruments. He then placed his head back against the head rest and saluted. I checked the white flag and clear deck ahead and dropped my arm for a fire signal. The catapult appeared to fire normally. I checked the plane on the other cat. It was not yet tensioned so I looked to see how 204 was flying off the bow. He started a normal rotation, then nosed over slightly and started another rotation, then nose over again and then rotated rather abruptly. I lost sight of the plane and turned to hold the plane on the other cat. When I looked back again I saw only a large splash.

Data recorded in catapult log for this launch: date 10-18-56 Time 1610 shot No. 6724; plane type FJ-3; weight 20.000 lbs; plane No. 204; launching accumulator pressure 3200 PSI; launching accumulator oil level between gauges 2 and 3; retracting accumulator pressure 850 PSI; retracting accumulator oil level 7 inches; end speed indicator inoperative

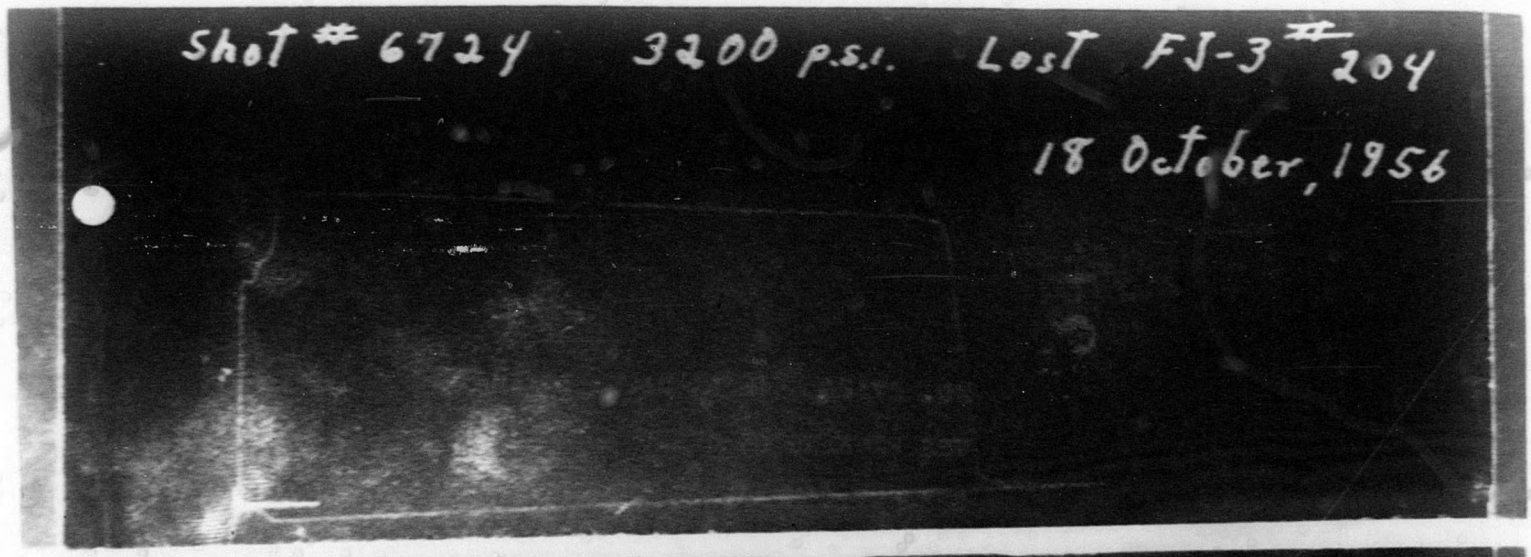
Using other launches of FJ-3 aircraft of same weight from same catapult, end speed is estimated 98-99 knots.

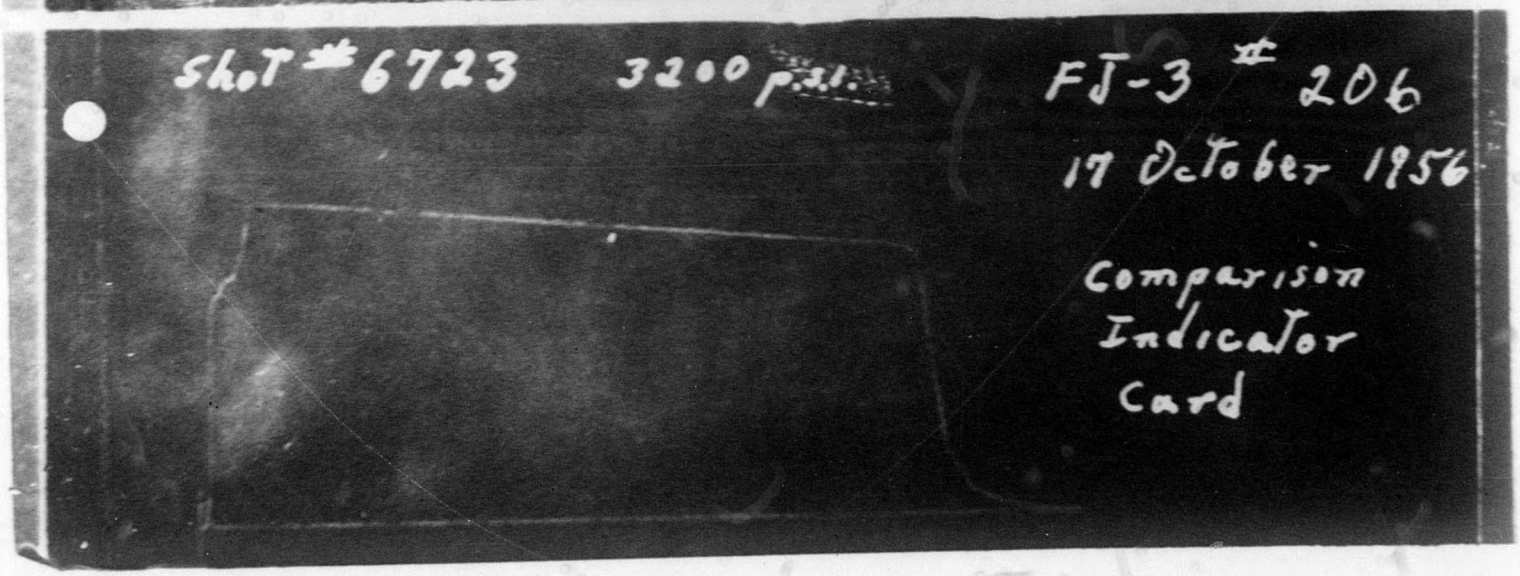
Pressure indicator cards indicate a normal power and brake stroke.

Aircraft launching bulletin NO. 5-27 FOR TYPE H, MARK 8 catapult.

(b) (6) (b) (6) [redacted] (b) (6) LT, USN

ENCLOSURE (2)


Shot # 6724 3200 p.s.i. Lost FJ-3 # 204
18 October, 1956


Shot # 6723 3200 p.s.i.
FJ-3 # 206
17 October 1956
Comparison
Indicator
Card

ENCLOSURE (3)

STATEMENT OF CWO (b) (6) [redacted], ASS'T CAT OFFICER

I observed the catapult launch and crash of FJ-3 BU NO. 136123 this date, from between the catapults.

The standard exchange of flight hand signals was executed between the catapult officer and the pilot of subject aircraft. The subject aircraft appeared to have lost power by the time it traveled half the length of the catapult track as the unusual roar of the engine could not be heard.

The subject aircraft gradually settled off the bow. I lost sight of the aircraft when it settled to about 20 feet off the water. At this time it was in a nose high attitude. Shortly afterward I observed water spray to about 100 feet followed by a column of smoke.

I next observed the wreckage composed of 2 external fuel tanks and an undetermined object, as the ship passed by.

(b) (6) [redacted]

ENCLOSURE (3)

30

ENCLOSURE (4)

STATEMENT OF (b) (6) [redacted] ABC, V-2 DIV CATAPULT CHIEF

Interportation of catapult pressure indicator cards shows that the shot was normal, full pressure and all mechanical functions were satisfactory. Electrical and space speedometer did not function so no reading was obtained from that source. From my position between the aircraft the sound of the aircraft's engine did not give the normal roar I'm accustomed to from this type of aircraft, and it seemed to be more of a diminishing whine such as can be heard when throttle is retarded. This whine started just as the nose wheel depressed from initial catapult acceleration.

(b) (6) [redacted] (b) (6) [redacted] ABC

ENCLOSURE (4)

ENCLOSURE (5-A)

STATEMENT OF LTJG (b) (6) Fighter Squadron TWENTY ONE

On 18 OCTOBER 1956 I was scheduled to be the number 2 man in a flight of 4 on a 15,000 foot gunnery hop, on which LT. ROBINSON was the division leader. Because of lack of wind the hop was delayed. I manned my plane on the port catapult. Prior to starting, the catapult officer informed me I should have 9 knots to spare. I was in the process of making a manual fuel check and was checking max power in manual when I heard LT ROBINSON'S plane on the Starboard catapult, turning up to full throttle. Looking up I observed the Cat Officer giving him a two finger turn-up; so I throttled to idle to switch back to primary, in order not to delay the launch. My engine had not reached idle RPM when the starboard cat fired. The aircraft climbed about three feet with a slight nose high rotation right after leaving the deck. The aircraft stalled and the nose went over. About 10 feet before contacting the water, about 400 feet in front of the ship, the nose started to rotate and it hit the water in a very nose high attitude. The landing gear stayed in the down and locked position. The aircraft appeared to dig in very hard and sink almost immediately. The bow blocked my view right after contact with the water and as the ship passed to the left of the crash I could see black smoke starting to rise. The canopy was closed during the cat shot.

(b) (6) [redacted]

ENCLOSURE (5-A)

ENCLOSURE (5-B)

STATEMENT OF LT. (b) (6) [redacted], USN Arresting Gear Officer

I am the arresting gear Officer on the BENNINGTON. I observed the launch in question. I was standing among a group of flight deck personnel between the catapults. The FJ-3 side number 204 was launched with the canopy closed. I am a pilot and have observed hundreds of catapult launches.

(b) (5) [redacted]

(b) (5) [redacted]

Due to the inherent noise of a jet launch, I couldn't actually hear the engine decelerate, but by the same token the characteristic, full throated roar of the engine as it moved down the catapult track was noticeably absent. Once the aircraft left the catapult it was in a constant descent. The plane rotated slightly while descending; this had no effect on the descent and the nose of the plane was then lowered the same amount it had been rotated.

The next instant when last observed by me, the aircraft was in the same attitude (descending) that it had before the slight rotation. When last observed by me the landing gear was down.

I lost sight of the plane below the bow, ran forward but not in time to see the impact. Later, as the ship passed the area of impact I saw the tip of a golden colored crash helmet. (b) (6) [redacted]

ENCLOSURE (5-B)

ENCLOSURE (5-C)

STATEMENT OF (b) (6) [redacted] ADl, VF-21 forward checker

Upon starting the engine I watched to make sure the wing locks were in place and checked the flaps and dive brakes, the structure crew having previously checked the remaining items. I was watching when he checked his flight controls and went through his high power check. The canopy was closed and upon launch aircraft, he saluted and was shot. After clearing the end of the flight deck the plane appeared to climb, then abruptly lose altitude and there appeared an effort to raise the nose then settle again with a final attempt to raise the nose. A gyser of water rose and black smoke followed. My attention was then turned to the remaining planes as everyone was running toward the bow and I wanted to watch the intakes so no one else got hurt.

(b) (6) [redacted] ADl

(b) (6) [redacted]

ENCLOSURE (5-C)

ENCLOSURE (5-D)

STATEMENT OF LT (b) (6) [redacted] USN, VF-21

My position during the launch was in sky forward and therefore directly aft and behind FJ-3 side no. 204 airplane being catapulted. I observed the engine start, and it appeared normal from my observation point. From the time the engine was idling until the actual catapult launch I was moving about in sky forward watching other FJ-3's being started and was not observing 204 until just immediately prior to its being launched. (b) (5) [redacted]

(b) (5) (b) (5) [redacted] (b) (5) (b) (5)

(b) (5) (b) (5) [redacted] (b) (5) (b) (5) (b) (5) (b) (5) [redacted] (b) (5) (b) (5) (b) (5) This was followed by a nose over, another recovery and then the aircraft settled to the water in approximately a normal landing attitude about 600 feet ahead of the carrier. As the aircraft struck the water, its nose slewed left about 45°. There was what appeared to be a mild explosion as the aircraft struck the water with some pieces flying from the plane followed by a fire on the water.

(b) (6) [redacted] (b) (6) [redacted] USN.

ENCLOSURE (5-D)

46

ENCLOSURE (5-E)

STATEMENT OF (b) (6) [redacted], LCDR, USN, FLIGHT DECK OFFICER

At the time FJ side no. 204 was launched, I was standing on the Flight Deck about midway of the Island Structure. I watched the plane from the time it left the catapult until it disappeared from sight below the bow.

Since I am a pilot, I noted the plane's attitude and the pilot's manipulation of the controls.

The plane left the bow normally, then in a rather flat attitude, settled a little. At that time the pilot applied what appeared excessive "up" elevator with little response from the plane. Immediately an abrupt "down" elevator was applied with immediate response from the plane. The pilot immediately checked the down motion of the plane by applying "up" elevator enough to return the plane to a slightly nose high attitude. The "nose up" attitude did not seem excessive. By this time the plane was disappearing below the bow and the next thing I saw was a splash of water and black smoke. I saw no fire or smoke from the plane while in flight.

(b) (5) [redacted]

ENCLOSURE (5-E)

ENCLOSURE (5-F)

STATEMENT OF (b) (6) [redacted] AN V-1 DIV USS BENNINGTON

As #204 Was launched I heard a sound which I took to be that of a Jet Plane engine being cut. I followed #204 until actually striking the water. I at no time saw anything flying from plane or tail pipe. (b) (5) [redacted] (b) (5) [redacted]. I am the fly one phone talker forward. This is a true statement to the best of my knowledge. I noticed no ripples before the PJ-3 #204 struck the water.

(b) (6) [redacted] (b) (6) [redacted] AN V-1 DIV

USS BENNINGTON

ENCLOSURE (5-F)

ENCLOSURE (6)

STATEMENT OF LTJG (b) (6) [redacted], USNR, Helicopter Pilot

At 1610 one FJ-3 BUNO 136123 of VF-21 ATG-181, Piloted by LT J.R. ROBINSON crashed on being catapulted from the starboard catapult of the USS BENNINGTON (CVA-20). (b) (5) [redacted] (b) (5) (b) (5) (b) (5) (b) (5) (b) (5) [redacted] The plane seemed to porpoise several times before actually stricking the water in a relatively flat attitude. Immediately after the wall of water settled, the crash area was engulfed by flames.

I was over the area in less than 30 seconds but could only see the pilot's hard hat plus two tip tanks floating in the water. Remaining over the scene for approximately 25 minutes I saw nothing else in the way of crash debris.

I didn'T notice any rippling effect on the water aft of the plane as it went in.

(b) (6) [redacted] LTJG, USNR

ENCLOSURE (6)

ENCLOSURE (7)

(1) LT (b) (6) Maintenance Officer

A resume of the history of the aircraft and engine which was installed in the aircraft when it crashed is given below. A complete review of all available past discrepancy reports, inspection sheets, and aircraft, engine, and accessory logs reveal no apparent reason for malfunction.

(2) ENGINE HISTORY

1. Engine type J65-W-4B (Accepted As -4- Redesignated As -4B- 11 April 56 By VP-33)

2. Engine Serial No. W 610844

3. Accepted 12 Dec 1955

4. Transferred to Port Lyautey, M.A. 12-13-55

5. Issued To FasRon 104, NAS Port Lyautey 12-22-55

6. Issued to VP-33 12-23-55

Installed on FJ-3 BuNo. 135842
1st Intermediate inspection 1-9-56
2nd Intermediate inspection(Total Time 48.4 HRS) 3-1-56

7. Transferred 4-3-56 to FasRon 5, NAS Oceana for special investigation in accordance with ComAirLant Disp-301828Z of March 1956. Completed 60 hour inspection. Pulled Hot Section inspection and Turbine Blade Growth Check. First and second stage stators were cleaned by vapor blast and turbine was cleaned by using soft wire brush. Tightened rear main bearing lock sleeve nut 8. Transferred to VF-33 4-5-56 and Re-Installed on FJ-3 BuNo. 135842.

8. 3rd Intermediate Inspection Completed on 4-20-56
Total Engine Time 66.7 Hrs on 5-1-56
First Major Inspection Completed 5-15-56
Total Engine Time 117.4 6-1-56
First Intermediate Inspection Completed 5-31-56
Total Engine Time 149.2 hrs 6-28-56
Engine Removed For Distorted fuel and air tube and cracked burner basket.

9.
9. Transferred to FasRon 5 - installed 36 new fuel tubes R85 wac 608910, new combustion chamber liner R85-wac-608932. Installed new first stage stator - R85-wac-608931. Welded pressurization tube.
Engine transferred to VF-21 8-20-56

10. Major Inspection Completed As Acceptance Check Installed on FJ-3 BuNo. 136123. 8-29-56
Hot Start, 820° (see 12 below) 8-30-56
1st Intermediate inspection completed - 178.6 hrs on engine 9-12-56.
Engine Lost At Sea with FJ-3 BuNo 136123 10-18-56
Total Time on Engine 197.8 hrs

11. The following Technical Directives Were incorporated

J65 - TB -	24	86
	42A	34
	57A1	64
	91	84
	94	85
	121	90
COMAIRLANT ATB -	99	135
FJ-3	73	166
	103	177
	130	
	132	
	151	
	97	

Bu Aer Disp 181454Z OCT 54
181616Z OCT 55

12. On 8-30-56 a TPT of 820° C was recorded during start and is only know case of overtemperature on this engine. On 9-17-56 the TPT gage in the cockpit was found to indicate 15° higher than actual temperature of the Tail pipe.

AIRCRAFT HISTORY

1. FJ-3 BuNo. 136123

2. Accepted By Navy 29 Nov 1955 Under Contract No. 52-978

3. Issued to VF-21 21 December 1955

4. Had a total of 302.5 Hrs since acceptance and 301.0 Flight hours this tour.

5. Had total of 41 logged Arrested landings and Approximately 42 Catapult launches at the time of its crash.

6. No Structural Parts have been changed recently and the Engine was installed on 29 August 1956.

7. 18 September 1956 Normal flight control system failure at 38500 feet. System switched to alternate. Finding after investigation revealed low level of hyd fluid in Normal system. No leaks could be found. After servicing the system performed correctly in all respects.

(b) (6) [redacted]

LT, USN

ENCLOSURE (7)

546

ENCLOSURE (8)

STATEMENT of LT (b) (6) MEDICAL OFFICER

ENCLOSURE (1) to Medical Officer's Aircraft Accident Report
181.7-56

Item #15: Due to the nature of this accident in which neither the plane nor the pilot's body could be recovered, this report is necessarily limited. I shall confine my report to two topics the first, a theoretical analysis of injuries sustained by the pilot on impact with the water-gleaned from evidence presented concerning the plane's attitude and course when it crashed, plus markings and damage on the recovered helmet. The second a discussion of known physical and mental factors about the deceased pilot, and their possible contribution to the accident.

From the evidence presented to this accident board, one can deduce that the aircraft struck the water in a nose high attitude at a rather steep angle of impact, and traveling 115-120 knots. Before the major impact occured the plane swerved violently left so that the body of the fuselage struck the water approximately at a 45° angle to the flight path. Thus the pilot received a high peak, linear, transverse "G" force of high magnitude (estimated 40 G+ 10) forward and to the right. Examination of the recovered helmet substantiates this analysis. The right side of the visor guard is flattened inward and is imprinted with areas of dull black paint such as that on the instrument panel. The visor guard is split at the midline, and the sun visor within is crushed. Thus the pilot's right superior frontal-parietal skull area, contained within the helmet presumingly struck the instrument panel. (b) (5) [redacted]

(b) (5) (b) (5) (b) (5) (b) (5)
(b) (5) [redacted]

In addition it is noted that the oxygen mask was torn off at its hook attachments to the Y bar carriage, with the hook on the right strap more open and twisted than that on the left, suggesting that the attached mask struck an object in the cockpit when the pilot's head was thrown forward and probably turned to the left. Previous accident analysis in the FJ-3 aircraft have demonstrated that on sudden forward deceleration, the pilot's face may hit the control stick. (b) (5) [redacted]

(b) (5) (b) (5) (b) (5), (b) (6) [redacted]. In addition, linear fractures on the outer shell of the helmet superiorly and posteriorly suggest his head rebounded after the initial impact. Explanation of how the helmet became separated from the pilot's head is more difficult. The chin strap is intact. (b) (5) (b) (5) [redacted]

Concerning physical and mental factors, LT ROBINSON was a 33 year old Naval Aviator in the regular Navy with a total of 2781 hours flight time, 286 hours in type. (b) (6) [redacted]

(b) (6) [redacted]

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

[redacted]

On the evening preceding his fatal accident, LT BERTSON was on liberty. Upon returning to the ship (b) (5)
(b) (5) [redacted] although he had consumed alcoholic beverages. It was reported by his roommate that he obtained about 5 hours sleep before reporting to duty the day of the accident. Preceding the flight he volunteered no complaints to me in the ready room and appeared in good health. However, the day before, he had commented to his roommate that he "felt as though he was getting a cold, but could control that by taking two APC tablets every two hours." An additional factor to incorporate in this discussion is that this was the pilot's first catapult shot in the FJ-3 type aircraft on the rapid accelerating H-8 hydraulic catapult. His previous experience had been on the longer, steam catapult, where greater air-speed is obtained.

(b) (5)

(b) (5)

[redacted]

However, it is impossible to fully evaluate the effectiveness of all safety equipment due to loss of the aircraft and pilot. Concerning the primary cause of this accident, (b) (5)
(b) (5)
(b) (5) (b) (5)
(b) (5)
Several observers of the accident who are Naval Aviators described the flight performance after take-off as erratic - a series of stalls. Also, no attempt was made by the pilot to utilize emergency procedures as the plane settled, such as dumping the wing tanks or raising the landing gear. Although the following explanation is only a hypothesis in this accident.
(b) (5)
(b) (5)
(b) (5) (b) (5)
(b) (5) (b) (5)
(b) (5)

* The H-5 helmet has been mailed to Naval Aviation Safety Activity, NAS Norfolk, Virginia, for complete analysis.

(b) (6) [redacted] LT(MC), USNR

ENCLOSURE (8)

49

5

ENCLOSURE (9)

FROM: AEROLOGICAL OFFICER
USS BENNINGTON CVA 20 DATE: 18 OCT 1956

TO

SUBJ: WEATHER CONDITIONS EXISTING AT 0210 Z 18 OCT 1956

A. REASON: (CHECK ONE) AIRCRAFT CRASH X FIRE DRILL
EMERGENCY LANDING TIME

B. AIRCRAFT CRASH OR EMERGENCY LANDING DATA
TYPE FJ-3 BUREAU NO. 136123 PILOT ROBINSON
RANK LT USN

C. WEATHER AT TIME NONE

STATE OF SKY MOSTLY CLR CEILING UNLIMITED

PREVAILING VISIBILITY 15 MILES AT 0210 Z

RESTRICTIONS TO VISIBILITY NONE

SURFACE WIND AT 0210Z DIR.220DEG VEL 6 KTS

AIR TEMPERATURE 79° F. DEW POINT 73 F. REL HUMIDITY 72%

ALTIMETER 999 INCHES SEA LEVEL PRESSURE 1015.8 MBS

FLIGHT DECK CONDITION DRY WX CONDITIONS VFR

HEIGHT FREEZING LEVEL 12,600 FT. MSL

CLOUDS

TYPES, AMOUNT AND 2,000 CD [illegible] CUMULUS

HEIGHT ABOVE STATION 10,000 CD ALTOCUMULUS

SEA CONDITION 3 FEET FROM EAST

D. OBSERVER: (b) (6) [redacted] DG1 (SIGNATURE/RATE

E. REMARKS: (DUTY FORECASTER)

(b) (6) [redacted] LT USN
(SIGNATURE RANK/RATE

ENCLOSURE (9)