REPORT OF COLLATERAL INVESTIGATION:
MAJOR AIRCRAFT ACCIDENT
CH-53 S/N 68-10933
15 May 1975

INDEX

FORMAL REPORT OF INVESTIGATION

I. AUTHORITY

1. This collateral investigation was conducted on 28 May through 5 June 1975, at Nakhon Phanom RTAFB, APO San Francisco 96310, by Major John F. Guilmartin, Jr., [redacted], United States Air Force, duly appointed under the provisions of AFR 110-14 (Tab A).

II. MATTERS INVESTIGATED

2. This was an investigation into the facts and circumstances surrounding a major aircraft accident of 13 May 1975, involving a CH-53C helicopter, Serial Number 68-10933, assigned to the 56th Special Operations Wing located at Nakhon Phanom Royal Thai Air Force Base, Thailand (Tabs C and L).

III. FACTS

3. Said CH-53C aircraft, Serial Number 68-10933 (hereafter alternately referred to as Knife 01-3), crashed some 36 miles West of Nakhon Phanom RTAFB, at coordinates 17° 20' 05" North Latitude, 104° 02' 00" East Longitude, at approximately 2115 hours local, [redacted] on 13 May 1975, while on an operational staging flight (Tab L).

4. The mission was an operational staging flight to U-Tapao Royal Thai Navy Base, transporting assorted maintenance and support equipment (Tab C1.) one maintenance technician and 18 security policemen.

a. The crew of Knife 01-3 consisted of:

(1) Pilot, 1Lt James G. Kays, [redacted]

(2) Co-Pilot, 1Lt Laurence E. Froehlich, [redacted]

(3) Flight Mechanic, SSgt George E. McMullen, [redacted]

(4) Flight Mechanic, A1C Robert P. Weldon, [redacted]

All crewmembers were assigned to the 21st Special Operations Squadron.

b. One maintenance technician was carried:

(5) Crew Chief - Sgt Paul J. Raber, [redacted]. Sgt, Raber was assigned to the 56th Consolidated Aircraft Maintenance Squadron.

c. The remaining passengers were eighteen (18) Security Policemen assigned to the 56th Security Police Squadron.

(6) See Tab C2.

d. Cargo carried by Knife 01-3 included a tow bar, a hydraulic serving cart and miscellaneous maintenance gear.

(7) See Tabs C1 and M4.

5. The Aircraft Commander of Knife 01-3, First Lieutenant Kays, was awarded the aeronautical rating of Pilot effective 7 April 1972. 1Lt Kays completed his initial qualification training in the CH-53 on 14 April 1975. A current Medical Clearance was on file (Tab H). As of 12 May 1975, 1Lt Kays possessed 1508.3 flying hours. He had 186.3 hours in the CH-53. He had 5.5 hours of actual weather time. He had flown 84.4 hours in the pervious 90 days and 38.7 hours in the previous 30 days. (Tab D1)

6. The Co-Pilot of Knife 01-3, First Lieutenant Froehlich, was awarded the aeronautical rating of Pilot effective 15 January 1974. 1Lt Froehlich completed his initial qualification on 31 May 1974 (Tab D2). A current Medical Clearance was on file (Tab H). As of 12 May 1975 1Lt Froehlich possessed 563.1 flying hours. He had 363.1 H-53 time. He had flown 31.9 hours in the previous 90 days and 6.8 hours in the previous 30 days.

7. The senior Flight Mechanic aboard Knife 01-3, SSgt McMullen, completed his initial qualification on the CH-53 on 23 October 1973. He was certified as an Instructor Flight Mechanic on 20 August 1974 (Tab D3). A current Medical Clearance was on record (Tab H). SSgt McMullen possessed 1315.9 total flying hours as of 12 May. He had 486.2 hours of H-53 Time. He had flown 63.4 hours during the previous 90 days and 36.9 hours during the previous 30 days.

8. The second Flight Mechanic aboard Knife 01-3, A1C Weldon, completed his initial qualification on the CH-53 on 10 December 1974 (Tab D4). A current Medical Clearance was on record (Tab H). A1C Weldon possessed 178.9 total flying hours as of 12 May. He had 178.9 hours of H-53 time. He had flown 77.1 hours in the previous 90 days and 41.1 hours in the previous 30 days.

9. The crew of Knife 01-3 was listed on 56 SOW Form 0-132, according to local directives (Tab E). The 19 passengers were properly recorded as part of their mobility processing according to 56 SOW directives, the exignices of the service precluding normal manifesting (Tab C2). All personnel aboard Knife 01-3 were accounted for by remains found at the crash site.

10. The mission began in the late afternoon of 13 May 1975 as personnel from the 21st Special Operations Squadron, 56th Consolidated Aircraft Maintenance Squadron and 56th Security Police Squadron were alerted for deployment to U-Tapao RTNB. Crew briefings were completed in the prescribed manner, a current weather briefing was given to the crew (Tab G) and a proper clearance was filed and granted (Tab E).

11. Although destruction of the AFTO form 781 in the crash precludes any definitive conclusion, all evidence, including relevent work cards and other maintenance records, suggests that the forms and maintenance records of CH-53C 68-10933 were properly maintained and in order at the time of the fatal flight (Tab I). A proper pre-flight inspection was accomplished before the aircraft was released to the flight crew (Tab C3).

12. Pre-flight by the flight crew, loading, engine star and taxi were accomplished without incident. There is no ev - dence of the flight crew having encountered any delay or malfunction prior to the crash sequence; normal communications were maintained with the usual controlling agencies until an estimated maximum interval of five to seven minutes prior to impact.

13. Take off was logged at 2057L (Tab E. Greenwich mean or Z times are indicated in the transcript. These are 14 hours earlier then the local times shown here.) Turn out of traffic was accomplished normally and a climb to the assigned altitude of 9000' initiated. Following normal frequency changes, Knife 01-3 checked in with INVERT radar, reporting level at 9000' at 2110L. Positive radar contact was extablished and radar monitoring initiated (Tabs F and C5). At this point radar showed Knife 01-3 at 270°/39nm. Further attempts by the INVERT controller to contact Knife 01-3 beginning at 2116L were fruitless (Tabs F and C5). At 2125L, Knife 01-2, having assisted INVERT in attempting to raise knife 01-3, announced seeing a fire on the ground at his nine O'Clock. SAR activities were immediately initiated by INVERT. Investigation by Knife 01-2 and Knife 02-1 confirmed that this was, in fact, the crash site and that there was no sign of surviors (Tabs C4 and C5).

14. Compilation of available evidence suggests that Knife 01-3 suffered structural failure resulting in the separation of a main rotor blade beginning at or before 2116L. Separation of this blade was the result of a radial fatigue crack in the blade sleeve (Tabs J and M7,M8 and M9). This crack is held by expert testimony to have been in existance prior to the fatal flight (Tab J). This crack was so located that it would not have been visible without completely disassembling the sleeve and spindle assembly, an operation which is not performed by maintenance below depot level (Tab L3). Although there is no evidence to completely exclude the possibility that the ultimate failure of the sleeve and spindle assembly might have been accelerated by aerodynamic and structural loading resulting from some other, undiscovered problem, and although the potential for such problems is present in the CH-53 (Tabs C6 and C11), there can be no doubt that the fatigue crack did cause blade separation and that it would eventually have caused blade separation in the course of normal operation. There is, further, no doubt that such a main rotor blade separation would cause progressive structural disintegration as is known to have occured to Knife 01-3 from the distribution pattern of the wreckage (Tab L2), supported by eyewitness testimony (Tabs C7 and C8). The lack of any evidence of blade/fuselage contact (Tab J) effectively rules out the possibility of extreme control inputs, pilot-induced or otherwise, prior to the disintegration sequence.

15. Following last voice contact with INVERT, Knife 01-3 appears to have performed a right hand turn of approximately 270° and to have traversed at least three miles (without allowing for inaccuracies in the radar plot) prior to impacting the ground at about 2115L. The time of impact is fixed with some precision by the report of the co-pilot of Knife 01-2 (Tab C4) who, based on his logged off time and estimated elapsed time from takeoff, observed the explosion on impact. That Knife 01-3 exploded on impact is confirmed by the reports of Thai eyewitness who were, however, unable to fix the time with any greater precision.

16. Eyewitness testimony plus the fact that Knife 01-3 impacted the ground some three miles closer to Nakhon Phanom than the last confirmed radar plot suggests that the aircraft may have continued to fly for a period following the initiation of the structural disintegration sequence. If, in fact, the aircraft remained in any way controlable, this was only to a very limited degree and for a brief period of time. Pilot-initiated recovery was not possible.

17. Following separation of the first blade, the resultant severe dynamic imbalance caused the progressive separation of additional blades, ultimately tearing the main transmission from the airframe (Tabs L2 and M6). Eyewitness testimony and wreckage distribution suggests that this disintegration sequence occured rapidly and probably at an altitude of at least two to three thousand feet (Tabs C7, C8 and L2).

18. Confirmation of the identity of the wreckage was made on the spot by the crew of Knife 02-1 and on the following day by a full ground party (Tab C9). The fact that the crash occured at night, rapid notification by the INVERT controller and the rapid and efficient response of proper USAF authorities in dispatching a ground recovery team resulted in the sucessful recovery of a very high percentage of aircraft components which were not consumed in the fire of the main fuselage. The recovered components included the greater part of all main rotor blades and the bulk of the tail rotor. Pilferage by local villagers was not a significant factor: monetary rewards totalling $263.54 were paid for recovery of various components and a solatium of $22.02 was paid to the owner of the land on which impact occured (Tab K). Further claims against the Air Force are not anticipated (Tab K).

IV. SUMMARY OF EVENTS AND DISCUSSION

19. During the course of the investigation eleven (11) witnesses were interviewed. Thai eyewitness were interviewed by Mr. OPAS DUANGSOMOSORA and Mr. CHAICHANA PROMJOM, Community Activities Specialists, 56 CSG/CA, under the supervision of Capt DANIEL W. JACOBOWITZ, Chief, Military Civic Actions Branch. They, in turn, were sworn as witnesses. All witnesses were duly sworn prior to testifying (Tab B). In addition, certain laboratory reports, photographs and compilations of physical evidence were made available to the board (Tabs J, L and M). The evidence and testimony reveal that:

a. Review of the activities of the flight crew of Knife 01-3 on the day of the accident, 13 May 1975, and during the day preceeding the accident produced no evidence of any violation of standard operating procedures or Air Force directives. All evidence and testimony indicates that flight operations were performed in accordance with the aircraft flight manual and appropriate directives (Tabs C9 and C10)

b. Investigation produced no evidence that pre-flight and servicing activities by maintenance personnel, selection of passengers and loading of the aircraft were other than in accordance with appropriate directives. The flight crew was properly assigned. The passengers were proceeding under proper military authorization and proper authority.

c. Pre-flight aircrew briefings were found to have been thorough and were properly conducted.

d. Investigation produced no evidence that control of Knife 01-3 by controlling agencies was conducted other than in accordance with proper directives. Flight following and monitoring by INVERT radar was professionally conducted. Prompt realization by the INVERT controller that Knife 01-3 had disappeared from his scope permitted a prompt SAR reaction, leading to the expeditious recovery of the bulk of the wreckage.

e. Knife 01-3 took off at 2057L and turned Westbound on course as cleared, climbing to 9000' and reporting 9000' at 2110L. This was the last radio contact with Knife 01-3. Last radar contact was at 270°/39nm from Nakhon Phanom RTAFB. Between 2110L and about 2115L, when the copilot of Knife 01-2 observed what proved to be the impact explosion of Knife 01-3, a main rotor blade separated from Knife 01-3. Blade separation was caused by material failure; post accident investigation revealed a fatigue crack in the blade sleeve assembly. This crack was found to have been in existance prior to the initiation of the crash sequence and could not have been discovered by normal maintenance procedures.

The initial blade separation caused extreme dynamic loads on the aircraft which led to the progressive separation of the other blades, causing partial disintegration of the aircraft in flight including the separation of the main transmission from its mounts. As the disintegration sequence progressed, the aircraft was rendered uncontrollable. There is no evidence of any kind to suggest that pilot inputs had any causal effect in the disintegration sequence. Conversely, the fact that blade/fuselage impact did not occur suggests the possibility of stabilizing pilot inputs during the initial phases of the disintegration sequence. The crash was not surviveable. All 23 personnel on board were killed. The bodies of all 23 were accounted for in the wreckage.

f. As indicated by attached photographs, physical examination of the wreckage was facilitated by prompt location of the crash site. Key components of the aircraft were recovered leading to identification of the failed blade cuff assembly.

g. The fatigue crack in the blade cuff assembly is found to have caused blade separation and would ultimately have caused blade separation in the course of normal operation.

h. No evidence of hostile activity was found.

i. Supervision, crew qualification, air disipline, weather, hostile activity and maintenance performance and practices are found not to have contributed to this accident.

JOHN F. QUILMARTIN, JR., Major, USAF
Investigating Officer

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS THIRTEENTH AIR FORCE (PACAF)
APO SAN FRANCISCO 96274

REPLY TO ATTN OF: CC

19 MAY 1975

SUBJECT: Appointment of Investigating Officer Pursuant to AFR 110-14

TO: Major John F. Gilmartin
[redacted]
40th ARRS
APO 96310

1. You are hereby appointed collateral investigating officer to investigate the facts and circumstances surrounding a major aircraft accident involving the crash of a United States Air Force CH-53C helicopter, SN68-10933, assigned to the 56th Special Operations Wing located at NKP RTAFB, Thailand. This accident occurred on 13 May 1975, approximately 40 nautical miles from Nakhon Phanom, Thailand. This accident resulted in twenty-three fatalities including four crew members, one crew chief, and eighteen security policemen.

2. Your investigation will include examination into all relevant aspects of the matter including but not limited to supervisory defects, diminution of discipline, failure to follow directives and possible claims against the U. S. government. You are authorized to interview personnel, take statements or testimony, or examine records, and review directives you consider appropriate subject to the guidelines set forth by AFR 110-14, AFR 127-4 and other applicable regulations. The Staff Judge Advocate, 56 Combat Support Group, NKP RTAFB, Thailand, should be consulted for a briefing prior to beginning the investigation. Additionally, he is available for consultation and advice on any matters that may arise.

3. Your report will be in writing, prepared in accordance with the instructions in AFR 110-14 and applicable provisions of AFM 120-3. A verbatim record of the testimony of witnesses should not, however, be utilized; i.e., a signed affidavit by each witness will suffice. This report will be submitted to me not later than 5 June 1975. If this suspense cannot be met, your request for additional time should be submitted to the Staff Judge Advocate, this headquarters.

LeRoy J. Manor
LEROY J. MANOR
Major General, USAF
Commander

A

ADVICE TO WITNESSES

I am Major GUILMARTIN, appointed to conduct the collateral investigatio of and to gather all the facts and circumstances surrounding the accide t involving the CH-53 aircraft which occurred on 13 May 1975 on or near NAKHON PHANOM RTAFB Thailand. This investigation is separate and apart from the safety investigation conducted under AFR 127-4. The purpose of the collateral investigation is to obtain and preserve all available evidence for use in claims, litigation, disciplinary action, adverse administrative proceeding, and for all other purposes except for safety and accident prevention. Testimony before the safety aircraft accident investigation board is given with the understanding that it cannot be used for other than accident prevention purposes and all witnesses are advised that it will be treated in confidence. Testimony presented to the collateral investigator, however, may be used for any purpose deemed appropriate by competent authority. At the conclusion of this investigation, I will prepare a summary of evidence in lieu of findings and make appropriate recommendations. Do you understand the difference between the safety aircraft accident investigation and collateral investigation?

SWEARING OF PEPORTERS AND STENOGRAPHERS

"You swear (or affirm) that you will faithfully perform the duties of reporter of this investigation, so help you God."

SWEARING OF WITNESSES

"You solemnly swear that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, and nothing but the truth, so help you God."

(Should a witness state that, for reasons of religious belief, he is not permitted to take an oath, it is permitted that such a witness may make an affirmation. In such a case, the affirmation is administered in substantially the following language:)

"You solemnly affirm that the testimony you are about to give in the matter now under investigation shall be the truth, the whole truth, and nothing but the truth."

AFFIDAVIT

TESTIMONY OF MAJOR RICHARD S. CAMPBELL, [redacted]

As Wing Mobility Officer it was my responsibility to determine the load planning for all aircraft deploying to U-Tapao RTNB in support of the Mayaguez Operation. CH-53 aircraft, tail number 68-10933 had 1131 lbs of equipment and 19 passengers plus a crew of four for this deployment. This was not the heaviest loaded CH-53 deployed and at the time was below the Allowable Cabin Load (ACL) (6118 lbs) provided by the 21 SOS. There was no question of crew acceptance of this load since the 21 SOS had a pre-planned standard load of 1100 lbs of cargo and 20 passengers.

RICHARD S. CAMPBELL, Major, USAF
56 SOW Mobility Officer

Subscribed and sworn before me, this 29th day of May 1975,

JOHN F. GUILMARTIN, JR., Major USAF
Investigating Officer

C 111

A F F I D A V I T

Testimony of Captain Charles J. Heubusch, [redacted] USAF.

On 13 May 1975 I was directed by competent authority to assemble a ground security force for deployment to U-Tapao RTAFB. A portion of the force was to deploy aboard HH-53 and CH-53 helicopters of the 40th ARRS and 21 SOS from Nakhon Phanom RTAFB for subsequent employment in the Mayaquez operation. Other elements were deployed from Udorn and Korat and in place at U-Tapao. All personnel deployed in this operation were volunteers. The following individuals were part of that ground security force and were enroute to U-Tapao aboard airoraft 933 when it crashed:

Sgt Jimmy P. Black
Sgt Bobby G. Collums
SSgt Gerald A. Coyle
AlC Thomas D. Dwyer
Sgt Bob W. Ford
Sgt Gerald W. Fritz
TSgt Jackie Glenn
Sgt Darrell L. Hamlin
Sgt Gregory L. Hankamer
Sgt David A. Higgs
SSgt Faleagafulu Ilaoa
Sgt Michael D. Lane
AlC Dennis W. London
AlC Robert P. Mathias
Sgt William P. McKelvey
AlC Edgar C. Moran II
AlC Tommy R. Nealis
Sgt Robert W. Ross

CHARLES J. HEUBUSCH, Captain, USAF
Chief, Security Police

Subscribed and sworn before me this 29th day of May 1975.

JOHN F. GUILMARTIN, Jr., Major, USAF
Investigating Officer

C (7)

Testimony of MSgt Ronald B. Glover, [redacted], USAF

I certify and affirm that the Pre-flight inspection accomplished on CH-35C 68-10033 prior to its fatal flight was performed in accordance with the existing pre-flight work cards. A1C Cullen performed the inspection and I was his supervisor. The reliability of A1C Cullen, his maintenance techniques and knowledge is outstanding. I observed portions of his pre-flight inspection and can confidently say it was a properly performed inspection.

Ronald B. Glover

RONALD B. GLOVER, MSGT, USAF

[redacted]

CH-53C Line Chief

Subscribed and sworn before me, this 2nd day of Jun 75.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

C-131

A F F I D A V I T

Testimony of 2nd Lt David W. Greer, [redacted], USAF

On the night of 13 May 75, I was the co-pilot on Knife 1-2 We took off from NKP at 2120 and headed 270° on the start of a trip to U-Tapao RTNAB. Approximately five (5) minutes after take off I noticed a large explosion and fireball on the horizon. I pointed it out to the rest of the crew and we continued on course. Shortly thereafter Invert started a communcation search for Knife 1-3. After negative results, we requested a fix on their last position. We observed a fire on the ground at our 9 O'clock position and after relaying to Invert, we were instructed to hold. The time was 2135.

We held on scene until 2250 during which time we observed numerous cook-offs of various types of munitions. We maintained communications with Joker, Warlock and Knife 2-1 who eventually landed. When King arrived on scene we departed the site and continued on to U-Tapao.

David W Greer

DAVID W. GREER, 2nd Lt. USAF
[redacted]
Co-pilot

Subscribed and sworn before me, this 30th day of May 1975.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

C (4)

A F F I D A V I T

Testimony of 2Lt David A. Ford, [redacted] USAF.

1. As an INVERT Duty Controller, I was on duty the night of 13 May 75 and was assigned the task of providing flight following for Knife 01-3. At approximately 1413Z, I took handover of Knife 01-3 flight from NKP RAPCON at 270/26 miles. I postively identified him by position and Mode 3 squawk. He came up on our fequency, 292.3, whereupon I gave him Radar contact, Radar monitor. I radar monitored him for approximately 10 miles; when we lost radar and SIF contact; I marked the scope at 270/39 where we lost radar. After several sweeps with no return, I went out on the primary frequency (292.3) several times with no success trying to contact him. Knife 01-2 came up (270/24) and I immediately asked him to try to contact Knife 01-3, which he did with no success. I went out on Guard and also asked Knife 01, who was approximately (220/85), to attempt contact. He also was unsuccessful. Also, I had my tech contact Korat, Udorn and NKP RAPCON to see if any of them were talking to Knife 01-3. I advised Knife 01-2 when he was in the vicinity of Knife 01-3's last position. He spotted a ground fire and investigated. We initiated SAR activities.

2. The above statement is true to the best of my knowledge and belief.

David A. Ford

DAVID A. FORD, 2nd Lt, USAF
[redacted]

Subscribed and sworn before me, this 30th day of May 1975.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

C (5)

Testimony of 1Lt Michael B. Lackey, [redacted], USAF

On the night of 13 May 75, I was the aircraft commander of a CH-53, call Sign "Knife 02-1" assigned to lead a flight of CH-53's to U'Tapao AFB. Due to maintenance problems the flight was split up and our take-off time delayed. While still on the ground "Warlock" made a call for "any H-53 aircraft still on the ramp" to report to them. We called immediately, and they requested that we proceed west of NKP to investigate a suspected aircraft crash site. We were airborn at 2153 and immediately called "Knife 01-2" who was orbitting the crash site.

Upon reaching the area at 2210L we immediately made a pass across the site putting out two flares, passed across again at 1500 MSL, and then made an approach into the site stopping above the trees abeam the downed aircraft (approx 20 yds away), at 2220L. At that time I confirmed with the orbitting CH-53 that the still burning wreckage was an H-53. We hovered to a suitable landing area about 50 yds from the wreckage, landed, and disembarked one flt engineer, a flt surgeon, and a Medical technician.

They proceeded to the wreckage and looked for surviors. The orbitting aircraft warned that we had a large number of "lights" approaching from the N & NW and suggested we depart the ground party was picked up, and we took off.

Flight conditions that night were not good due to the lack of any moon and no visible horizon. For that reason we were required to use flares and our landing & search lights to make the approach into the sight. The only villages in the area were small and unlighted providing no good reference for the ground. Weather was clear with a high scattered deck at 13,000 which lelocked out any starlight.

Michael B. Lackey

MICHAEL B. LACKEY, 1Lt, USAF

[redacted]

21 SOS

Subscribed and sworn before me, this 3rd day of June 1975.

John F. Guilmartin Jr.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

(6)

Testimony of 1Lt Michael B. Lackey, [redacted], USAF

On the night of 29 Apr 75 while orbiting in the vicinity of the USS Midway in the S. China Sea in a CH-53C aircraft I experienced the momentary loss of both generators and all electrical power to the aircraft. Due to haze, overcast, and the fact that we were some 50 NM from the coast the only reference for flight was the ship. After about 15 sec one generator was reset. Shortly there after it failed again, but it was again reset. An emergency landing was made on the carrier once radio, intercom, and other electrics were restored. Only one generator was reset, the other would not return on the line.

Michael B. Lackey

[redacted]
MICHAEL B. LACKEY, 1Lt, USAF
21 SOS

Subscribed and sworn before me, this 3rd day of June 1975.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

(1)

Translation and transcription of interview of witness # 2.

We'er here with eyes witness of the aircraft accident in the vacinity of Ban Dong Ma Pai the participates are Capt Daniel W. Jacobowitz, Thai interpreter in Mr. Chaichana Promjom and the suhject is Mr. Somphao Kengkote. Sounds in the back groung are a tropical monsoonal rain strom. Interview was conducted at Mr. Somphao's home. Other persons present included Mr. Somyod, an eye witness to the incident.

J: Jacobowitz

S: Somphao

C: Chaichana

J: What is your name sir?

S: My name is Mr. Somphao.

J: What were you doing at the time that you saw the aircraft crash?

S: I was bird hunting.

J: Where were you at the time that you saw this happen?

C: At Pak Huey Wai, the name of the river.

J: Were you down on the river bed or up on the side of the bank up on the rice field?

S: On the side of the river bank.

J: That is he was up, not down by the water, but up the river side. OK.

J: What was it the first called your attention or first made you look at the helicopter?

S: The helicopter flew by and the light shine at me, I put out my light and stook and watched.

C: When the chopper flew over by him, he looked up and the chopper spot light shine to him. And then he afraid of the helicopter. He blew out his light. He turned.

J: Mr. Somphao was afraid that the helicopter was after him, so he blew out his hunting light.

J: After he turned out the light helicopter turned the spot light toward him. OK.

J: What did he do after he turned out his hunting light?

S: I stood still and watched and heard the explosion and saw flame in the air craft and it fell.

C: After he turn down his hunting light he stand still and looking for the helicopter and after that a few minutes he heard a crash of noise and the chopper catch fire.

J: During the time between when he turn down his light, and when he heard the noise of the crashed of helicopter, was he able to see helicopter at all?

C (8)

S: Yes, I saw the helicopter.

J: After he turned out the light, can he tell me the way whic the helicopter flew, until it crashed.

S: The aircraft came from east.

J: He was standing on the east bank of the river.

S: I was standing on the band south of river.

J: When the aircraft passed over you did you notice anything unusual except from the light, that they shined on you.

S: I saw the light shine on me, and I did not see anything unusual. And after few minutes I heard the sound of a crash.

J: The time when it caught fire was it already on the ground or not?

S: I saw the aircraft caught on fire while it was still in the air.

J: The helicopter was still in the air. Can he tell us what that fire looded like?

S: Looked like a normal fire. (flame)

C: Red fire, just like the normal fire.

J: Did he describe it as in looking like, or identification light on the aircraft, the normal light which turns around, or did mean burning flame?

S: Just normal like burning flame.

J: When he saw the flame was it on the top, bottom, from or the back of helicopter?

S: I saw the burning flame underneath the helicopter.

Note: Makes hand motion indicating flame spreading up sides of heliconter.

S: After that the chopper lose control and then swerve to the right side.

J: When helicopter passed over you on fire, could you see how far it went toward Dong Koi can you see how far it went toward that village or did it just fall straight down?

S: After I saw the helicopter caught on fire it was still flying and crashed before Dong Koy village.

J: How far toward Ban Dong Koy Did it fly before it fell?

S: Didn't reach Don Koi.

S: The helicopter flew with fire about over one kilometer.

C: I about one Kilometer from Ban Don Koi?

C: Far from that.

C: No, No, far from Ban Don Koi.

J: Came within one klick of Ban Don Koi

(9)

C: But did not reach the village

J: Never reached the village of Ban Don Koi.

J: After he saw it pass over him with a light on did it just fall straight toward Don Koi, or come back east, north, south or west?

C: After chopper on fire pass over him, the chopper lose control and heading to Ban Don Koi village and came down, came down, ca came down and then.

J: Did it come down at first-gentle or very sudden, that is did it came down at a nice smooth rate or fall like a rock.

S: The chopper spun down.

J: He indicates that it was making rocking side to side motion and a spinning motion. He indicates the chopper was spinning around every which way. Every possible o[c] combination of turn over. That is revolving along its axis and cross its axis also.

J: How far from where he was did airplane crash into the woods? Where it hit the ground?

S: I was about one ½/km from where the airplane crashed.

J: How far from Don Koi is the spot where he was standing?

S: About three Kilometers (Note: actually 2.5)

J: Did the helicopter ever go further west, than the point it crashed? Did it pass over and come back or did it go straight to the crash?

C: After the chopper caught on fire, the chopper swerved to the right side to the north, and then fall in to the ground.

J: When the chopper went over him, did it stay on south side of the river with him, the same side of the river with him, until it turned to the crash site?

C: His site is an another stream, separate from Nam Oon, from the big stream.

J: He was on the small tributory.

S: Small one.

J: He was south of the small tributary. OK.

J: At the time the light shined on him what noise was the helicopter making?

S: Tu tu tu ta toot.

C: Normal?

S: No, not normal.

C: It sounded like the engine sputter.

(10)

J: Would you make that sound again? Imitate the sound it makes.

S: Ta ta ta tope.

J: How long did that noise continue?

S: About one or two minutes.

J: The noise like that continue a maximum of 1 or 2 minutes. During the time the helicopter was falling from the sky, or turning over, was that noise still continuing?

S: Make noise Toom. and them stop.

C: The sound is not continue, it sound. "Boom" and then disappear.

J: After a loud noise, the sound ceased, stopped completely. OK.

J: When the light shine on him, did it look like a regular spot light-shine on him? Did he readly think a spot-light-shine? Or was it some other kind of light. A didd he really feel that a spot light was deliberally shinning on him.

S: Spot light.

J: Was the light steady or did it flash on and off.

S: Steady light.

J: A steady light-shined on him.

J: Did that spot light that was shinning on him turn off before he saw the flames or did it continue to shine on him for ~~every~~ any length of time?

S: The spot light-off, before the flame started.

J: Mr. Somphao, have you even see arcwelding being done?

S: Yes, I have see arcwelding before.

J: How would he say this light look compared to an arcwelding li light? Does it look the same as that light or different from light he knews he has seen from arcwelding light.

S: The light from the chopper is different from arcwelding light.

J: What was the different between that light and an arcwelding light?

S: The light from chopper shine like flashlight.

J: Could Mr. Somphao tell, if the light was from right in the aircraft or from the same place where the sound of engine trouble was coming from?

S: The light shine to me came from the head of the aricraft.

C: Front of the aircraft.

J: At anytime during the incident did you ever see or hear a second helicopter?

S: Yes, I saw the second airplane.

C(11)

C: He saw the second helicopter, just few minutes from the fi.st one he saw.

J: When did he see the second helicopter?

: After the first helicopter crashed.

J: Did the second helicopter that flew over you shine the spot light on the ground toward the the first helicopter?

S: The second helicopter shined the spot light around the first one.

J: Did the light the helicopter number 2 make, did the light #2 look the same as the light on helicopter number 1 make when it shined on him?

S: Light is dirrerent, the second helicopter light brighter than the first helicopter light.

J: The light from second helicopter was stronger than the light from the first helicopter.

J: Is he absoulutely sure, that the light that he thinks is the first helicopter was not the light from second helicopter?

S: The second helicopter light was brighter than first helicopter.

C: He assure that the light from the first one and second one are the same, same light, but the second one is stronger.

J: What I wanted to find out was he does think at all that this light was from the same helicopter. He is sure that this Light is form a second helicopter?

S: This light came from different heliopter. The first light shine on me came from the first helicopter.

J: Aside from the spot light which shine on you, did you ever see any regular red light, that helicopters and airplanes use?

J: First you ask him if he has ever seen a regular light on a helicopter. Then ask him if he saw that kind of regular light on the helicopter that crashed.

S: No, I did not see any light at all.

C: He did not see any red light, a regular light, just the light from spot light.

J: It was dark out and he saw the helicopter turning every which way, how could he tell that the helicopter was turning every which was in the air?

S: I saw by the light of the flames.

J: He could tell the aircraft was turning over and over because it was lighted of its own flame.

J: The description includes the fact that the airplane was on fire everywhere at this point.

J: Mr. Somphao did you see the airplane hit the ground?

S: No, I did not see.

C: No, He didn't see because of the trees.

J: HE did not see becarus of trees in the way.

J: Could he see fire came up from where it hit?

S: Yes, I saw the fire flame.

J: Because of trees at that trees, where was a time when he did not see airplane at all and then the fire came up, is this true or not?

S: I is true, it disappeared for a while.

J: MR. Somphao did you ever heard when a helicopter is just flying over normally?

S: Yes, I heard the regular noise of helicopter before.

J: The first helicopter you heard did it sound anything like a regular helicopter?

S: The first helicopter sound that I heard is dirrerent than a regular helicpter.

J: The sound of this helicopter was completely different from normal helicopter which he has heard.

S: Before the flame, I heard sound of tub, tub, tub, and seem to me sound came from the engine, and one big "TUB" and then caught on fire.

J: First the noise and then the fire, or the other way around?

C: First the noise, and then the fire.

First before the chopper caught fire, he heard the noise like the engine sputter, tod, tod, tod, tod, and ten the stronger noise, a crash of noise and then fire.

J: Did the crash of noise, sound anything like an explosion or sound like a piece of machine hit another piece of machine?

S: I sound like a broken piece.

J: HE definitely feels the sound not the sound of the bomb.

End side 1
Side 2

The remainder of the interview indicated Mr. Samphao attended school through 4th grade, and was never in the army.

C (U3)

Testimony of Mr. CHAICHANA PROMJOM, Thai Civilian. The Preceeding is an accurate and complete transcription of information obtained by me from Mr. SOMPHAO KENGKOTE on 16 May 1975.

Chaichana Promjom

Mr. CHAICHANA PROMJOM
Community Actions Specialist, 56 CSG/CA

The preceeding is a transcript of an interview conducted by the undersigned, using Mr. CHAICHANA as translator. The interview was conducted under my supervision at BAN DON KAEN, Thailand, on 16 May 1975.

DANIEL W. JACOBOWITZ, Captain USAF

Chief, Military Civic Actions Branch

Subscribed and Sworn before me this 31st day of May 1975.

JOHN F. GUILMARTIN, JR., MAJOR USAF
Investigating Officer

C (14)

Translation and trascription of interview of witness #1.

J: Jacobowitz

S: Mr. Somyod

O: Mr. Opas

J: Tape of interview in regard to the aircraft accident. The paticipants are Capt D.W. Jacobowitz, Thai interpreter is Mr. Opas Duangsamosora. We have here are eyewitness who lives in the village of Ban Don Kean. We are exactly at the spot which he was standing when he saw the aircraft fall. This is a rice field, which is south of the village of Ban Don Kean, about one half Km.

J: What is your name sir?

S: Mr. Somyod Keancharong is my name.

J: What were you doing here when you saw the airplane?

S: I was frog hunting.

J: Was it raining, or was it like this, or was the sun out?

S: No rain at that time.

J: Was it dark?

S: Yes, it was dark.

J: It was dark at that time, when he saw the airplane.

J: When you were working here catching frogs, something made you looking at the airplane. What was it that made you look at the airplane, instead of the frogs?

S: I looked at the airplane and hear the airplane stop normal flying, shut off my light and then I sat down.

He only looked at the airplane because he heard it.

J: We are standing here in the rice field. Have him point in the direction ~~which is~~ where he saw the helicopter first.

S: That side, where the fire and explosion came.

J: He pointed almost due east.

J: After you heard the noise originally you looked up at the air- aircraft. Did the noise change any from the aircraft from what you originally heard?

S: Yes, the noise did change.

J: After the noise changed you were looking at the airplane. What happened next?

S: After noise of the aircraft changed, I saw the white light on the aircraft explode, and blow up with sparks.

(115)

O: He saw sparks on the aircraft and white light.

J: When the aircraft was flying did it look like white light was on the back, front or one side.....He remembers helicopter he saw the night that they put the stuff on the truck and it had lights on each side and light on the back. The sparkes come from which light, compared to the one he saw on the other helicopter.

S: I saw the light on the rear end the aircraft. (Literally uses word for "ASS")

O: ~~The~~ He indicated the rear of the aircraft.

J: The sparks came from the back of the aircraft. How did the other light on the airplane look when the sparks started?

S: No other light at all. The other light went off.

J: The other light went off?

J: After the other light went off, what did he see next?

S: I heard the sound, dum, dum, dum, dum, inside the aircraft.

O: He heard the engine problem.

J: He heard the engine problem. Can he make a noise that sounds like the engine did at that time?

S: The sound, sounds like "Tu lu lu, tu lu lup"

O: How many times?

S: Two times.

J: Were the sparks also happening at the same time?

S: Have nothing, sir. Just noise.

O: Don't see any sparks at all, just heard the noise only.

J: What happened next?

S: The pra pup sound of the aircraft continued about 3 minutes and then I saw the light again.

O: He says after that about three minutes, he still hear about engine problem about three minutes and have light again. Light came on again.

J: Was it a red light like he saw on the other helicpter?

S: I saw all red light, but not the normal light of the airplane above the river.

O: Normal light or fire?

S: Not light from a bulb.

J: Flame, not light.

J: Was the flame on the bottom or an the top of the aircraft? Could he tell at all?

S: The flame I saw it looks like white light sparks like arc-welding, but the sparks stronger than the first time I saw.

J: Yes, I understand.

J: At this time, his pointing at a map on which he has shown where he is standing in the rice field, the place where he originally saw and noticed the helicopter and the spot of the original flames. He pointed to a spot where the helicopter had crossed the river and was approaching the river again which is an old stream with many curves in it, and makes a loop at the spot where he was stading. He pointed to where he would have seen the light just prior to the helicopter crossing the stream a second time in the loop. After we got this point, and pointing in the map he said he saw the fire the second time. What happen after that?

S: At this time the aircraft is far awa then aircraft go down and down and spinning and out of sight in the jungle.

O: He says that, after that, he saw the plane, away, away from him, he can not see too good, but he look like the helicopter try down swing. Try to swing down.

J: You moved your hand in a spiral motion. This indicates, that he throught it was already spinning. How could he tell that it was already spinning? Could he see the two lights of an ordinary helicopter are they operating or not at this time?

S: The fire on the aircraft is not the ordinary light, but it exploded. "Tub, tub, tub," and it goes down and down, with abnormal sound of the aircraft.

O: He saw down, down and look where next down, down all the time.

J: OK. How much area of the sky did it take? I am moving my hand at a 45° angle. Did it fall, like this 45° a angle a 30° angle, straight down or like this.

S: It's still for away from me but....

J: He indicates with his hand, the aircraft made gentle turn and suddenly fell.

J: After it started to turn back, what happened at this point you have drawn on the map with a big circle?

S: This indicates turn over to Ban Dong Koi.

J: He was still flying smooth like this (like I move my hand) when it went over Ban Dong Koi?

S: It too far away and out of my sight but the villager at Ban Dong Koy told me that some parts were found in the temple area.

J: So let us not talk about what somebody told him. When it was over Ban Dong Koi he could not see it any more.

S: After passed by Ban Dong Koi. I heard sound and saw the fire clearly after it crashed.

O: He said he heard the engine problem after the helicpter passed Ban Dong Koi village.

(11)

J: He could still hear. Was it still making "bud da rup, wa ca rup" or different noise?

S: Yes, same noise.

J Nest thing he saw was a big flame?

J: Did he see the big flame here? He saw it shoot up from the ground or what?

S: I came from this direction. I saw fire "soop" up and heavy smoke like a smoke from factory chimmey but the engine is still on.

O: He said he saw big flame one time, up from the ground, after that he saw smoke, he still hear the engine run.

J: What is the engine run round like at this time?

S: After I saw smoke, I heard the engine run about couple minutes, sound "Dung, dung, dung".

O: He heard like engine run "dung dung" about two minutes. And what happen after two minutes?

S: The engine stopped.

O: He said the engine run too light, not hear too good. After that he did not hear anything.

J: Not hear too good?

J: When he saw the fire, at the moment he saw the fire, could he hear anything?

S: I do not hear anything, except explosion.

O: After that he heard the explosion.

J: At the time he saw the fire, was that the last time he heard the engine or not? OK, it was.

J: What did he do after he saw the fire?

S: I put out the light, and ran through this field to jungle. I am afraid of aircraft and worried about my house.

O: He too afraid, put out his light, run over to his house.

J: He did not run toward the accident scene at all?

S: I stayed home until the explosion was over and went to bed.

J: He indicated to you only that it turned back and came back over the river to the place where it crashed. How did he know that he turned back? Did he get that from talking to people who live in this village or did he actually see that it turned back this way?

S:

C (18)

S: I guessed it turned back. The man with the baby said it did. I saw some parts at Ban Don Koi and at the big wide rice field there is parts at Wat Don Koi. I saw a lot myself.

O He is not sure that aircraft run back or not, but other guy with him, told him the plane try to come back. And he said he look at situation, at Ban Dong Koi there are many pieces of parts. He think that airplane tries to turn back, but he did not see with his eyes, he just estimate.

J: OK, fine.

J: Does he knows the man who is carrying the baby?

S: Yes, I know him.

J: Please tell me his name.

S: Mr. Sampau.

J: Where Does he live: (in Thai)

S: Ban Don Dan Phan.

J: You are already know that you did not get any trouble for talking to us, and we give come money and we going to give money again. Could you tell the man who had the baby that he will have no trouble if he comes to talk to us and he will get money too?

S: No, I do not expect any money, but apologise for any mistakes in my statement.

O: He really want to help us, he does not expect any money, he sorry about this part here on map, he could not see too good, but he think should be this way, because he saw many people pick up parts right here.

J: Indicating an area north of crash site.

J: Did he actually see the helicoptor cross the river for second time? By his own eyes?

O: he does not see by his own wyes but the man with the baby tole him. That man saw better than Somyod.

J: We have to find the man with the baby.

J: Tell him to make a noise like helicopter make he first heard it.

S: The noise of the aircraft is not normal loud and soft noise. Opas, he says sound like an engine problem. Making a noise like an engine problem was the thing that drew his attention to the chopper.

S: That was the first thing that made me look at the helicopter. This is the noise soft and loud Tum tum tum (high)
Tum tum tum (low)

J: Before this thing with a helicopter, has he ever heard a helicopter before?

S: Yes.

J: How did it compare to the helicopter he has heard before?

S: If it is normal when the aircraft fly by it wouldn't sound high and low, just dum, dum, dum, dum.

J: Why did he look up at this helicopter?

S: Just wanted to see it.

J: How you been in the Army?

S: Yes, drafted in the Army.

J: How far did he go in school? Did he graduate from high school?

S: Yes, 4th grade, read and write.

J: When you were in the Army, were your in the artilleny, the infantry, a mechanic or what did he do?

S: A regular Army private.

J: When you were in the Army did you ever fire an automatic weapon?

S: No, but fired rifle, model 88.

J: It's a bolt action rifle, right? (actually u.s. M-1)

J: Has he ever heard automatic fire?
S

S: I never saw any type of automatic rifle. (This statement cannot be true)

J: I was goint to ask him, if it sounds the same, but if he never heard before is no point in asking him that question.

J: I don't think we have anything else accent we would like you to help us sometime. If you can; see the man with the baby, tell him to come to the base and we will pay for his ride on the bus, and give money to talk on the tape recorder the same way.

S: How we are going to get intouch with you?

S: My supervisor will give you his personal card. Go to NKP BTAFB and call 3981 and then our MCA peraonnel will come and pick you up at the main gate.

J: Thank you very much and we'll take you home now.

J: This completed the interview. It should be noted the officer during the interview is not rated.

Note: The Thai translator has indicated the witness uses the from of "I guess, of I think, or it could be" often, rather than the positive forms used by the other witness.

Testimony of Mr. OPAS DUANGSOMOSORA, Thai Civilian. The preceeding is an accurate and complete transcription of information obtained by me from Mr. SOMYOD KEANCHAIRONG on 15 May 1975.

Opas Duangsomosora

Mr. OPAS DUANGSOMOSORA
Community Activities Specialist, 56 CSG/CA

The preceeding is a transcript of an interview conducted by the undersigned and using Mr. OPAS as translator. The interview was conducted under my supervision at BAN DON KAEN, Thailand on 15 May 1975.

DANIEL W. JACOBOWITZ, Captain USAF
[redacted]
Chief, Military Civic Actions Branch

Subscribed and sworn before me, this 31st day of May 1975.

JOHN F. GUILMARTIN, JR., Major USAF
Investigating Officer

C (21)

A F F I D A V I T

Testimony of 2Lt Calvin O. Wachs, [redacted], USAF

To the best of my knowledge, neither 1Lt Kays nor 1Lt Froehlich had done anything which might in any way have conpermised their ability to safely accomplish the task in which they were engaged. Based upon personal observation and contact, neither pilot appeared physically ill in the slightest amount so as to affect their flying abilities.

After landing at the crash site sometime between 2145 and 2200 the same evening, the party of three, including one of our flight engineers and a flight surgeon, that went to the actual site reported being able to identify parts of the tail section of a H-53 helicopter. They also reported possible magnesium flames within the burning rubble and apparantly there were no survivors.

Calvin O. Wachs

CALVIN O. WACHS, 2Lt, USAF

Subscribed and sworn before me, this 30th day of May 1975.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

C (27)

A F F I D A V I T

Testimony of Major Howard A. Corson, [redacted], USAF

1. On 13 May 1975, I was serving in my capacity as Squadron Operations Officer, 21st SOS. Crew assignments to CH-53C 68-10933, Knife 01-3, were made under my supervision.

2. Lt Kays was scheduled to fly a local transition the morning of 13 May 1975. Official schedule published by DOO will provide details. Crew duty period started at 0800L/13 May 1975.

Lt Froehlich flew a first pilot upgrade ride in the afternoon with Lt Lackey as I recall. Again the official DOO schedule will provide details.

The OPS - 10 Reports should be available in the squadron as an additional written record of the day's flights. "TARS" should also be available in the squadron. Lt Schoppelry's and Lt. Froehlich's training records are also available to provide insight into the day's training.

As our alert occurred the evening of 13 May 75, I began preparing aircrews and making tail number assignments for the flight to U-Tapao. My attempt was to organize crews as closely as possible to those crews flying the Saigon evacuation.

I assigned Lt Kays' as aircraft Commander on A/C 933.

I assigned Lt Froehlich as copilot on Aircraft 933. Lt Kuno had been Kays' copilot on the Saigon mission, however, because Lt Kuno's girl friend was on station I made the decision to let him remain at NKP, I did this because of the worsening situation in Laos etc. and increasing concern for dependents etc. at NKP. Lt. Froehlich did not participate in the Saigon mission as he was DNIF, Kays' and Froehlich made a very strong pilot team.

I assigned Sgts Cole and Riley to Kays' crew as they were on the Saigon mission with him. At approx 1945, I departed the squadron for my quarters to pack my gear as I was still in civilian clothes. About five minutes after I arrived at the quarters I received a call from MSgt Sherman, my Flight Engineer NCOIC. The subject discussed was the assignment we had made of Flight Engineers to Lt Brims' crew. Our objective in setting up aircrews is always to construct them to provide the most capable possible. Experience of aircrews is considered when setting up aircrews. We had set Lt Brims' crew up with two relatively inexperienced Flight Engineers and Lt Kays had two highly experienced types. To strengthen our aircrew configuration, I directed that Amn Weldon go on Lt Kays' crew and that Sgt Riley be placed on Lt Brims' crew.

Lt Kays had asked that I replace MSgt Cole on his crew because, in his personal opinion, MSgt Cole had been drinking. I did not discuss this with MSgt Cole at the time but rather concentrated immediately on replacing the crewmember.

(23)

I had extra flight engineers available, but due to previous changes to Lt Kays' crew as discussed in my previous written statement, I had to insure that MSgt Cole was replaced by a highly competent flight engineer.

My original decision was to place Sgt Hoffmaster on Lt Kays' crew. Sgt Hoffmaster was DNIF at the time the squadron was alerted but subsequently was returned to flying status. Time was of the essence as Lt Kays' aircraft was ready for pre-flight and immediate departure to U-Tapao. I could not locate Sgt Hoffmaster at the time so I directed that SSgt McMullen replace MSgt Cole on the crew.

In retrospect - I recall SSgt McMullen to have been one of the first to show at the squadron after the alert was initiated. I recall SSgt McMullen looking over my shoulder at the crew assignments and stating his desire to participate. I was not aware of any alcohol consumption by SSgt McMullen nor did I smell any on his person at that time and he was within 2-3 feet of me.

Lt Kays' accepted SSgt McMullen as his replacement Flight Engineer and made no comments questioning SSgt McMullen's capacity to perform his assigned duties. I personally was not informed by any person in the squadron nor did I have any knowledge that SSgt McMullen may have consumed some alcohol. If I had such knowledge I would have selected another Flight Engineer for Kays' crew.

Subsequent to Lt Kays' crew departure for the aircraft, I personally talked to MSgt Cole. I informed him that I had replaced him on the crew at Lt Kays' request because of Lt Kays' personal feeling that Cole had consumed too much alcohol. After talking to MSgt Cole, I was of the opinion the MSgt Cole had been drinking but not excessively.

I feel confident that if there had been any question in Lt Kays' mind prior to departure that SSgt McMullen had been drinking, he would have requested another replacement Flight Engineer. Lt Kays was professional in every way, never accepted less than 100% duty performance - and thus I am confident that Lt Kays was not aware of any dirnking that evening by SSgt McMullen.

Flight orders had been typed and signed for Kays' original crew and changes made by the squadron operation clerks. An ICAO flight plan was signed and filed for Lt Kays' flight to U-Tapao. Lt Kays was briefed that his mission was to depart for U-Tapao with his assigned PAX load and await further orders at U-Tapao. Clearance to launch for U-Tapao was to be obtained from Warlock. Crew was briefed to double check aircraft loading that it was within limits and that the fuel load was to be 9500 lbs.

C (24)

5. "The above statement is true to the best of my knowledge and belief."

Howard A. Corson Jr.
HOWARD A. CORSON JR., Major, USAF
[redacted]
Squadron Operations Officer

Subscribed and sworn before me this 29th day of May 1975.

JOHN F. GUILMARTIN JR., Major, USAF
Investigating Officer

C (24)

Testimony of 1Lt. Donald R. Backlund, [redacted], USAF

In my professional opinion, simultaneous loss of both generators in the H-53 at night, with no outside horizon reference available (visual horizon, cloud deck or ground lights), would result in loss of control. This would result from a total loss of control instrumentation and loss of stability augmentation modes of the AFCS (Automatic Flight Control System). Time available to attempt resetting of generators would vary with conditions and pilot experience/response. However, I would estimate that loss of control would be total in no more than 25 seconds.

DONALD R. BACKLUND, 1Lt., USAF
Chief, Aircrew Standardization and Evaluation Branch, 40ARRS

Subscribed and sworn before me this 4th day of June 1975.

JOHN F. GUILMARTIN, JR., Major USAF
Investigating Officer

C (25)

PREPARED 75 MAY 14 — INDIVIDUAL FLIGHT RECORD — AS OF 75 MAY 13 — PCN N3

PILOT (INQUIRY)

NAME: KAYS JAMES G — ASC: 1A — EFFECTIVE: 74 JUN 01 — FAC: 1 — CMD-ASGND: — PAF — CMD-ACFT: — PAF — ACFT/BAC: CH053C

GRADE: 1LT — CURR-ARO-RTI: HEL PLT — ORG-RT-DT: 72 APR 02 — RPI: 1 — FLY-ORGN: — 0056 — SQ: V — CR: — POI/DATE:

SSAN: [redacted] — ADDN-ARO-RTI: NONE — ORG-RT-DT: — RSA: Y — FLT-REC-LOC: RFCV — OP-LOC: RFCV — BASE: KP RTAFB TH

OSD: 71 JUN 09 — ASD: 71 AUG 29 — SERV-CATS: MBRS=A ACFT=A — ACIP-OPS-FLYING: 3 YRS 9 MOS — ACIP-PROF-FLYING: 0 YRS 0 MOS

DATE MO DY	M/D/S	TAIL NMBR	MSN SYM	DUTY POSN	TOTAL	DAY VFR	DAY INST	NIGHT VFR	NIGHT INST	SIML INST	TRAIN SIM	LANDINGS TYPE AND NMBR	PENT S	PENT H	APPR P	APPR N	NMBR OF SORTIES	LOCAL USE
04 19	CH053C	627	A7	CP	.3	.3												
04 19	CH053C	932	A7	CP	1.6	1.6												
04 19	CH053C	932	A7	FP	1.5	1.5						RL 1					1	
04 19	CH053C	627	A7	FP	.3	.3						RL 1					1	
04 20	CH053C	932	A7V	FP	2.3	2.3						RL 1					1	
04 20	CH053C	932	A7V	CP	2.2	2.2												
04 25	CH053C	932	02A	CP	1.1	1.1												
04 25	CH053C	932	02A	FP	1.1	1.1						RL 3					1	
04 29	CH053C	932	02A	CP	4.0	1.5		2.5										
04 29	CH053C	932	02A	CP	.5	.5												
04 29	CH053C	932	02A	FP	4.0	1.5		2.5				RL 4 RN 3					9	
04 29	CH053C	932	02A	FP	.5	.5											1	
05 02	CH053C	932	A7	CP	.2	.2												
05 02	CH053C	932	A7	FP	.3	.3											1	
05 03	CH053C	625	A7	FP	1.5	1.5						RL 6					9	
05 03	CH053C	625	A7	CP	1.6	1.6												
05 05	CH053C	932	A7	FP	.9	.9						RL 2					4	
05 05	CH053C	932	A7	CP	.9	.9												
05 06	CH053C	927	A7	AC	3.5	3.5												
05 11	CH053C	933	D8	CP	1.5	1.5											1	
05 11	CH053C	926	D8	CP	.7	.7											1	
05 13	CH053C	627	T3	IP	3.4	3.4						RL 3					1	
					33.9	28.9		5.0				21 3					31	

PILOT	1ST-PLT	I/PLT	CO-PLT	CMD-PLT	EVAL-PLT	OTHER	TOT-PLT	STUD	CIV	OTH-US	FGN-MIL	GRND-TOT	CMBT	CM
THIS MON	12.4	.4	14.6			3.5	33.9					33.9		
TO-DATE	782.7	217	260.4			30.7	1290.8	217.5				1508.3		

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 3510TH FLYING TRAINING WING (ATC)
RANDOLPH AIR FORCE BASE, TEXAS 78148

AERONAUTICAL ORDER
48

7 April 1972

1. The following 2D LT's, Det 1, 3615 AB Gp, ATC, Fort Rucker, AL, having successfully completed Course Number P-V4C-A-2, Undergraduate Helicopter Training Class 72-20, graduating 2 May 72, are awarded the aeronautical rating of Pilot, effective 2 May 72, per AFM 35-13, para 1-14c(3) and are required to participate frequently and regularly in aerial flights in such rating per Sec 102, EO 11157, 22 Jan 64 and AFM 35-13, para 2-5a. FSC changed from 7Y to 1Y. Officers will comply with AFM 35-13, para 2-12. Authority: AFM 35-13, para 1-7b(2).

JOHN L ANDRADE, [redacted]
MICHAEL B LACKEY, [redacted]
GARY B OKONOWSKI, [redacted]
RONALD VICKROY, [redacted]
JOSEPH D YOUNG, [redacted]

JAMES G KAYS, [redacted]
JAMES E O'DAY, [redacted]
JOHN S RANCK, [redacted]
THOMAS F VRANISH, [redacted]

2. Suspension from flying status of [redacted], Det 1, 3750 AB Gp, ATC, Fort Wolters, TX, imposed per VOCO on 12 Nov 71, and confirmed by AO-182, para 1, this hq, this stn, 3 Dec 71, per AFM 35-13, para 4-9a(1), is revoked. FSC 7Y. Officer will comply with AFM 35-13, para 2-10. Authority: AFM 35-13, para 4-9a(1).

HOYT S. VANDENBERG, JR., Colonel, USAF
Commander

OFFICIAL

DONALD E. REEL, Lt Col, USAF
Chief of Administration

DISTRIBUTION
B

AO-48

D(7)

RECORD OF EVALUATIC

TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)	TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)
UH-1F	INITIAL QUAL	18 JUL 72	CP (Q)(MAC)				
UH-1F	INITIAL QUAL	18 AUG 72	AC (Q)(SAC)				
UH-1F	INITIAL INSTRUCTOR	8 FEB 73	IP (Q)(SAC)				
UH-1F	ANNUAL INSTRUMENT	31 AUG 73	IP (H)(SAC)				
UH-1F	[illegible] NOTICE [illegible] EXAMINEE	7 FEB 74	FIN(Q)(MAC)				
UH-1F	ANN QUALIFICATION NO NOTICE	28 FEB 74	FEAC(Q)(MAC)				
UH-1F	NO NOTICE INSTRUCTOR	16 APR 74	FEAC(Q)(MAC)				
CH-53	Annual Qual.	4 Oct 74	Q-1				
CH-53	Annual Inst.	3 Dec 74	Q-1				
CH-53	Initial Qual	12 Dec 74	Q-1				
CH-53	Annual Qual/ Mission Qual	11 Feb 75	Q-1				
CH-53	IP upgrade	3 Apr 75	Q-1				

AF FORM 942 NOV 72 PREVIOUS EDITION IS OBSOLETE

D(3)

CERTIFICATION OF REVIEW

SIGNATURE	RANK	DATE
Laurence E. Froeblich	1Lt.	19 Feb 75

PACAF FORM DEC 73 126

D(4)

CERTIFICATE OF AIRCREW QUALIFICATION

TYPE OF CHECK	AFM 60-1	MAJOR COMMAND	OTHER (Specify)	ELIGIBILITY PERIOD	DATE COMPLETED
	☐ QUALIFICATION ☐ INSTRUMENT	☐ MISSION QUALIFICATION	Upgrade	NA	3 April 75

I. EXAMINEE IDENTIFICATION

NAME (Last, First, Middle Initial)	GRADE	SSAN
Kays, James G.	1 Lt	[redacted]

ORGANIZATION/LOCATION	AIRCRAFT/CREW POSITION/CREW NUMBER (If applicable)
21SOS/NAKHON PHANOM RTAFB	CH-53C/Pilot

II. QUALIFICATION

GROUND PHASE			FLIGHT PHASE		
EXAMINATION/CHECK	DATE	GRADE	MISSION/CHECK	DATE	TIME
Open Book	10 Feb 75	98%	I/Qualification	3 Apr 75	2.5
Closed Book	10 Feb 75	100%			
Bold Face	10 Feb 75	100%			
Instructor	2 Apr 75	100%			

QUALIFICATION LEVEL			RESTRICTION (As applicable) (Explain in Comments Section below)	ADDITIONAL TRAINING DUE DATE(S)
1	2	3		
XXXX				
EXPIRATION DATE OF QUALIFICATION: NA			None	INSTRUMENT QUALIFIED: [X] YES ☐ NO

COMMENTS (If more space is required, continue on reverse)

(See Reverse)

III. CERTIFICATION

I CERTIFY that I have been briefed on the recommendation below and understand the action being taken this date.

DATE	TYPED NAME AND GRADE OF EXAMINEE	SIGNATURE
APR 4 1975	JAMES G. KAYS, 1 Lt	James B Kays

The above aircrew member has demonstrated [X] satisfactory ☐ unsatisfactory performance and knowledge of procedures, techniques, equipment, and airmanship required for the safe and successful accomplishment of his assigned flight duties.

	CHECK AS APPLICABLE	ORGANIZATION	DATE
1	XX REMARKS	56SOW	APR 4 1975

TYPED NAME AND GRADE OF FLIGHT EXAMINER	SIGNATURE
RONALD VICKROY, 1 Lt	Ronald Vickroy

	CHECK APPLICABLE BOX(S)			ORGANIZATION	DATE
2	☐ REMARKS	☒ CONCUR	☐ DO NOT CONCUR	21SOS	APR 14 1975

TYPED NAME AND GRADE OF REVIEWING OFFICER	SIGNATURE
JOHN H. DENHAM, Lt Colonel	John H. Denham

	CHECK APPLICABLE BOX(S)			ORGANIZATION	DATE
3	☒ REMARKS	☒ CONCUR	☐ DO NOT CONCUR	56SOW	APR 14 1975

TYPED NAME AND GRADE OF FINAL APPROVING OFFICER	SIGNATURE
LOYD J. ANDERS JR., Colonel	Loyd J. Anders

AF FORM 8 MAR 74 PREVIOUS EDITION WILL BE USED.

D(5)

1. A. MISSION DESCRIPTION: Lt Kays was administered an Instructor Pilot Evaluation. The mission was flown in the NKP local pattern, Chiang Khrua AB and the northeast confined area. All maneuvers were completed with Lt Kays occupying the left seat. The sequence of events was as follows: normal, steep and shallow approaches; maximum performance, normal, and running takeoffs, straight ahead, 90° and 180° autorotations, GCA with a simulated single engine approach and landing on final; confined area takeoff and landing followed by a simulated hoist pattern. During the evaluation the flight examiner assumed the role of student. Lt Kays planned and flew a very good check ride. His knowledge of systems in the aircraft is commendable. His instructional techniques and flying proficiency are very good. All Bold Face emergency procedures were discussed on the ground or simulated in the air when feasible. The Squadron Commander and Squadron Operations Officer were present for the debrief.

B. DISCREPANCIES NOTED:

(1) EMERGENCY/PROCEDURES (Autorotations), Item 1 (Critical) (Q). During the 90° turning autorotation Lt Kays was late in applying correct rudder control allowing the aircraft to skid while in the turn. Recovery procedures were implemented and no other problems were noted.

C. RECOMMEND CORRECTIVE ACTIONS:

(1) Lt Kays was extensively debriefed on the positive application of pedal during a turning autorotation, to allow for a smooth coordinated maneuver. No additional corrective action is recommended.

D. ADDITIONAL COMMENTS: The Wing Commander, Deputy Commander for Operations and the Squadron Commander were present for the mission summary.

2. Reviewing Officer's Remarks: NONE

3. Approving Officer's Remarks: Lt Kays is qualified to perform as an Instructor Pilot in the CH-53 aircraft.

D(6)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330

REPLY TO ATTN OF: AFMPC/DPMDOP2
RANDOLPH AFB TEXAS 78148

13 Jan 75

SUBJECT: Correction of Aviation Service Date/Officer Service Date

TO: Base Flight Records Custodian
2849 ABG/OTFR
Hill AFB UT 84401

1LT James G. Kays [redacted]
IN TURN

1. A review of Master Personnel Records reveals that the following Aviation Service Date(s) is/are incorrect or not recorded. The correct date(s) is/are as follows:

Aviation Service Date (ASD): 71 AUG 29

Officer Service Date (OSD):

Basis for correction: SO AA-509, Randolph AFB, 18 Aug 71, establishes UHT reporting date of 29 AUG 71.

2. Necessary changes will be input by this headquarters to correct the date(s) in APDS.

3. A copy of this letter will be permanently maintained with individual flight records, since it is furnished in lieu of orders or amendment thereto. This letter also serves as source documentation for submission of Military Pay Orders.

FOR THE CHIEF OF STAFF

FREDRIC D. MUISE, Major, USAF
Chief, Officers Actions Section
Directorate of Pers Data Systems
Asst DCS/Pers for Mil Pers

CY TO: AFAFC/MPJB

FL-DPMDR-104

D(7)

EPARED 75 MAY 14 — INDIVIDUAL FLIGHT RECORD — AS OF 75 MAY 13 — PCN N352

PILOT (INQUIRY)

NAME: FROEHLICH LAURENCE E — ASC: 1A — EFFECTIVE: 74 JUN 01 — FAC: 1 — CMD-ASGND: — PAF — CMD-ACFT: — PAF — ACFT/BAC: CH053C/C
GRADE: 2LT — CURR-ARO-RT: HEL PLT — ORG-RT-DT: 74 JAN 15 — RPI: 1 — FLY-ORGN: — 0056 — SQ: V — CR: — POI/DATE:
SSAN: [redacted] — ADDN-ARO-RT: NONE — ORG-RT-DT: — RSA: Y — FLT-REC-LOC: RFCV — OP-LOC: RFCV — BASE: NKP RTAFB THA
DSD: 72 JUN 07 — ASD: 73 APR 22 — SERV-CATS: — MBRS-A — ACFT-A — ACIP-OPS-FLYING: 2 YRS 1 MOS — ACIP-PROF-FLYING: 0 YRS 0 MOS

ATE D DY	M/D/S	TAIL NMBR	MSN SYM	DUTY POSN	TOTAL	DAY VFR	DAY INST	NIGHT VFR	NIGHT INST	SIML INST	TRAIN SIM	LANDINGS TYPE AND NMBR	PEIT S	PEIT W	APPR P	APPR N	NMBR OF SORTIES	LOCAL USE
5 07	CH053C	626	S3	CP	1.3	.2	1.1											
07	CH053C	626	S3	FP	1.3		1.3										1	
07	CH053C	626	D8	CP	.7	.7											1	
08	CH053C	626	S3	FP	.5	.5											1	
5 08	CH053C	626	S3	CP	.5	.5												
5 13	CH053C	928	T3	FP	2.5	2.5						RL 5					1	
					6.8	4.4	2.4					5					4	

LOT	1ST-PLT	I/PLT	CO-PLT	CMD-PLT	EVAL-PLT	OTHER	TOT-PLT	STUD	CIV	OTH-US	FGN-MIL	GRND-TOT	CMBT	CMBT-S
IS MON	4.3		2.5				6.8					6.8		
-DATE	207.4		115.2			40.5	363.1	200.0				563.1		5

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 29TH FLYING TRAINING WING (ATC)
CRAIG AIR FORCE BASE, ALABAMA 36701

AERONAUTICAL ORDER
183

3 Dec 73

The following 2D LT, Det 1, 29 ABGp, ATC, Ft Rucker, AL, having successfully completed Course P-V4C-A-2, Undergraduate Helicopter Training, Class 74-11, graduating 15 Jan 1974 are awarded the aeronautical rating of Pilot, effective 15 Jan 74 per AFM 35-13, table 1-1c(3), and are required to participate frequently and regularly in aerial flights in such rating per EO 11157, sec 102, 22 Jun 64, and AFM 35-13, para 2-5a. FSC changed from 7Y to 1Y. Authority: AFM 35-13, para 1-7b(2).

LAURENCE E FROEHLICK, [redacted]
WALLACE H JONES, [redacted]
HENRY M MASON, [redacted]
DENNIS K MILLER, [redacted]

FOR THE COMMANDER

HEADQUARTERS 29 FLYING TRAINING WING OFFICIAL

JOHN R. CLEMENTS, Captain, USAF
Chief, Central Base Administration

DISTRIBUTION
"W"

AO-183

D(9)

RECORD OF EVALUATION

TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)	TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)
CH-53	InitiallQual.	30 May 74	Q-1				
CH-53	PACAFR 51-6	26 Jul 74	Q-2				
CH-53	Annual Inst.	10 Dec 74	Q-1				

AF FORM 942 NOV 72 PREVIOUS EDITION IS OBSOLETE

D (10)

CERTIFICATION OF REVIEW

SIGNATURE	RANK	DATE
Martin Lewandusky	CAPT	25 JUL 74
Laurence E. Froehlich	1Lt	10 Jan 75

PACAF FORM DEC 73 126

D(11)

CERTIFICATE OF AIRCREW QUALIFICATION

TYPE OF CHECK	AFM 60-1	MAJOR COMMAND	OTHER (Specify)	ELIGIBILITY PERIOD	DATE COMPLETED
	☐ QUALIFICATION ☒ INSTRUMENT	☐ MISSION QUALIFICATION		Aug - Dec	10 Dec 74

I. EXAMINEE IDENTIFICATION

NAME (Last, First, Middle Initial)	GRADE	SSAN
Froehlich, Laurence E.	1st Lt	[redacted]

ORGANIZATION/LOCATION	AIRCRAFT/CREW POSITION/CREW NUMBER (If applicable)
21SOS/NAKHON PHANOM RTAFB	CH-53C/Pilot

II. QUALIFICATION

GROUND PHASE			FLIGHT PHASE		
EXAMINATION/CHECK	DATE	GRADE	MISSION/CHECK	DATE	TIME
Instrument	13 Sep 74	91%	CP/Instrument	10 Dec 74	2.5
Ann Inst Crse	12-13 Sep 74	Comp			

QUALIFICATION LEVEL			RESTRICTION (As applicable) (Explain in Comments Section below)	ADDITIONAL TRAINING DUE DATE(S)
1	2	3		
X X X			None	
EXPIRATION DATE OF QUALIFICATION: Dec 75				INSTRUMENT QUALIFIED: ☒ YES ☐ NO

COMMENTS (If more space is required, continue on reverse)

(See Reverse)

III. CERTIFICATION

I CERTIFY that I have been briefed on the recommendation below and understand the action being taken this date.

DATE	TYPED NAME AND GRADE OF EXAMINEE	SIGNATURE
DEC 10 1974	LAURENCE E. FROEHLICH, 1st Lt	Laurence E. Froehlich

The above aircrew member has demonstrated ☒ satisfactory ☐ unsatisfactory performance and knowledge of procedures, techniques, equipment, and directives required for the safe and successful accomplishment of his assigned flying duties.

1 CHECK AS APPLICABLE ☒ REMARKS		ORGANIZATION: 56SOW	DATE: DEC 10 1974
TYPED NAME AND GRADE OF FLIGHT EXAMINER: RONALD VICKROY, 1st Lt		SIGNATURE: Ronald Vickroy	
2 CHECK APPLICABLE BOX(S) ☐ REMARKS ☑ CONCUR ☐ DO NOT CONCUR		ORGANIZATION: 21SOS	DATE: DEC 14 1974
TYPED NAME AND GRADE OF REVIEWING OFFICER: JOHN H. DENHAM, Lt Col		SIGNATURE: John H. Denham	
3 CHECK APPLICABLE BOX(S) ☐ REMARKS ☑ CONCUR ☐ DO NOT CONCUR		ORGANIZATION: 56SOW	DATE: DEC 14 1974
TYPED NAME AND GRADE OF FINAL APPROVING OFFICER: RICHARD M. PASCOE, Colonel		SIGNATURE: Richard M. Pascoe	

AF FORM 8 MAR 74 PREVIOUS EDITION WILL BE USED.

D(2)

1. A. MISSION DESCRIPTION: This was Lt Froehlich's Annual Instrument Check IAW AFM 60-1. The mission was flown in the NKP Radar Traffic Pattern. All required maneuvers were completed to include: Unusual attitude recovery, steep turns, holding, fix to fix navigation, one GCA, one ASR approach, and one TACAN approach followed by a missed approach. Spatial disorientation was demonstrated. All bold face emergency procedures were discussed on the ground or simulated in the air when feasible. Ground egress and cockpit familiarity were demonstrated. Lt Froehlich has excellent control touch and shows a sound knowledge of instrument procedures. The Squadron Commander was present for the mission critique.

B. DISCREPANCIES NOTED: None

C. RECOMMENDED CORRECTIVE ACTION: None

D. ADDITIONAL COMMENTS: The Wing Commander, Deputy Commander for Operations and the Squadron Commander were present for the mission summary.

2. Reviewing Officer's Remarks: None

3. Approving Officer's Remarks: None

D (3)

EPARED 75 MAY 14 — INDIVIDUAL FLIGHT RECORD — AS OF 75 MAY 13 — PCN N352

NONRATED (INQUIRY)

NAME: MCMULLEN GEORGE E III ASC: 9D EFFECTIVE: 74 JUL 27 FAC: CMD-ASGND: PAF CMD-ACFT: PAF ACFT/BAC: CH053C/C
GRADE: SSG CURR-ARO-RT: NO RATG ORG-RT-DT: RPI: FLY-ORGN: 0056 SQ: V CR: POI/DATE:
SSAN: [redacted] ADDN-ARO-RT: NONE ORG-RT-DT: RSA: FLT-REC-LOC: RFCV OP-LOC: RFCV BASE: NKP RTAFB THA
OSD: N/A ASD: N/A SERV-CATS: MBRS-A ACFT-A ACIP-OPS-FLYING: N/A

ATE O DY	M/D/S	TAIL NMBR	MSN SYM	DUTY POSN	TOTAL	DAY VFR	NIGHT VFR	TRAIN SIM	NMBR OF SORTIES	LOCAL USE
4 19	CH053C	927	08	HM	.5	.5			1	
4 19	CH053C	927	A7	HM	3.9	3.9			2	
4 19	CH053C	627	08	HM	.5	.5			1	
4 20	CH053C	625	A7V	HM	4.6	4.6			1	
4 29	CH053C	927	02A	HM	1.0	1.0			1	
4 29	CH053C	927	02A	HM	9.0	9.0			9	
5 02	CH053C	927	A7	HM	.7	.7			1	
5 04	CH053C	932	A7	HM	.4	.4			1	
5 05	CH053C	933	A7	HM	1.0	1.0			4	
5 10	CH053C	926	08	HM	1.8	1.8			1	
5 10	CH053C	933	08	HM	1.0	1.0			1	
5 11	CH053C	933	08	HM	1.5	1.5			1	
5 11	CH053C	926	08	HM	.7	.7			1	
5 13	CH053C	928	T3	IS	2.5	2.5			1	
					29.1	29.1			26	

N-RATED	TOTAL	CMBT	CMBT-SPT
S MON	29.1		10.0
DATE	1315.9		15.0

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 56TH COMBAT SUPPORT GROUP (PACAF)
APO SAN FRANCISCO 96310

AERONAUTICAL ORDER
13

2 May 1975

1. MAJ THOMAS W. WHITE JR., [redacted] 7AF, PACAF, this stn, is awarded the aeronautical rating of Command Pilot per AFM 35-13, table 1-1a. Authority: AFM 35-13, para 1-7b(3).

2. So much of AO 47, 313 CSG, 12 Apr 72, pertaining to the crew member status of SSGT HARRY H. BLANTON JR., [redacted], 21 SOS, PACAF, this stn, is amended to include: "EFFECTIVE TERMINATION DATE 15 May 75".

3. Para 1, AO 186, 834 CSG, 4 Nov 71, as amended by AO 77, 363 CSG, 8 Nov 73, which designated SSGT DONALD R. MCDOWELL, [redacted], 21 SOS, PACAF, this stn, as a crew member, are rescinded effective 2 May 75. Reason for rescission: Reaccomplishment of AO. Authority: AFM 35-13, para 5-7b and para 5-9a(7).

4. AO 28, 50 TFW, 20 Aug 70, which designated SSGT GEORGE E. MCMULLEN, [redacted], 21 SOS, PACAF, this stn, as a crew member, is rescinded effective 2 May 75. Reason for rescission: Reaccomplishment of AO. Authority: AFM 35-13, para 5-7b and para 5-9a(7).

5. AO 42, 803 CSG, 21 Jun 74, which designated SSGT NICK MORALES, [redacted], 21 SOS, PACAF, this stn, as a crew member, is rescinded effective 2 May 75. Reason for rescission: Reaccomplishment of AO. Authority: AFM 35-13, para 5-7b and para 5-9a(7).

6. Verbal orders of the Comdr, 56 SOW, PACAF, this stn, on 1 Feb 75 designating TSGT EMORY L. CRAIG JR., [redacted], 21 SOS, PACAF, this stn, DAFSC A43170C, as an optional crew member to participate in frequent and regular aerial flights are confirmed, exigencies precluded written orders in advance. EFFECTIVE TERMINATION DATE 29 Jan 76. In flight duties to be performed are essential to the accomplishment of the mission of the CH-53 aircraft. Only flying time which is required, performed and logged in above specified aircraft will be creditable for pay purposes. This order remains in effect after discharge and immediate reenlistment provided there is no PCS, break in service or change in duty assignment which would change airman's flying status. Hazardous duty status is changed to 1. ASC is changed to 9D. Authority: AFM 35-13, para 5-7b.

AO-13

D (15)

7. Verbal orders of the Comdr, 56 SOW, PACAF, this stn, 20 Apr 75, designating SGT DALE H. THUROW, [redacted] 40 ARRS, MAC, this stn, DAFSC A43150C, as an optional crew member to participate in frequent and regular aerial flights are confirmed, exigencies precluded written orders in advance. EFFECTIVE TERMINATION DATE 10 Apr 76. In flight duties to be performed are essential to the accomplishment of the mission of the HH-53C aircraft. Only flying time which is required, performed and logged in above specified aircraft will be creditable for pay purposes. This order remains in effect after discharge and immediate reenlistment provided there is no PCS, break in service or change in duty assignment which would change airman's flying status. Hazardous duty status is changed to 1. ASC is changed to 9D. Authority: AFM 35-13, para 5-7b.

8. Each of the following named airmen, 21 SOS, PACAF, this stn, DAFSC indicated, is designated as an optional crew member to participate in frequent and regular aerial flights effective 2 May 75. EFFECTIVE TERMINATION DATE is indicated. In flight duties to be performed are essential to the accomplishment of the mission of the CH-53 aircraft. Only flying time which is required, performed, and logged in above specified aircraft will be creditable for pay purposes. This order remains in effect after discharge and immediate reenlistment provided there is no PCS, break in service or change in duty assignment which would change airman's flying status. Hazardous duty status is changed to 1. ASC is changed to 9D. Authority: AFM 35-13, para 5-7b.

GRADE, NAME, SSAN	DAFSC	TERMINATION DATE
SSGT DONALD R. MCDOWELL, [redacted]	A43150C	2 Jun 75
SSGT GEORGE E. MCMULLEN, [redacted]	A43170C	19 Jul 75
SSGT NICK MORALES, [redacted]	A43170C	29 Jan 76

FOR THE COMMANDER

Russell K. LeDroux

RUSSELL K. LEDROUX, MSgt, USAF
Asst Chief, Central Base Administration

DISTRIBUTION
"D"

D(V6)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 56TH COMBAT SUPPORT GROUP (PACAF)
APO SAN FRANCISCO 96310

SPECIAL ORDER
PA-022

21 September 1974

1. The following officers, 7 AF, PACAF, this stn, are assigned Aviation Service Code as indicated effective date indicated. Auth:- AFM 60-352.

	ASC	Effective
COL BENJAMIN F INGRAM, [redacted]	3J	10 Jun 74
CAPT RONALD W IVERSON, [redacted]	1K	31 Jul 74
CAPT GARY S OLIN, [redacted]	1K	15 Jun 74

2. The following airmen, organization indicated, PACAF, this stn, are assigned Aviation Service Code 9D effective date indicated. Auth: AFM 60-352.

	Effective	Organization
TSGT GORDON F DAHLUND, [redacted]	2 Aug 74	56 SCW
TSGT WALTER T HALL JR, [redacted]	16 Aug 74	56 SCW
TSGT ROY D WENDT, [redacted]	1 Jun 74	56 SOW
SSGT GENE O COPE, [redacted]	20 Aug 74	56 SOW
SSGT WILLIAM W DIEHL, [redacted]	4 Aug 74	56 SOW
SSGT JON D HARSTON, [redacted]	15 Aug 74	21 SOS
SSGT GEORGE E MCMULLEN, [redacted]	1 Jun 74	21 SOS
SSGT BILLY R MIZELL, [redacted]	1 Jun 74	56 SOW
SSGT NICK MORALES, [redacted]	1 Aug 74	21 SOS
SSGT DUANE F MOUNTAIN, [redacted]	1 Jun 74	56 SCW
SSGT KENNETH S ROCKNEM, [redacted]	1 Jun 74	56 SCW
SGT TERRANCE W ARNDT, [redacted]	1 Jun 74	21 SOS
SGT HENRY H BLANTON, [redacted]	1 Jun 74	21 SOS

FOR THE COMMANDER

James W Tate

JAMES W. TATE, Major, USAF
Chief, CBPO

Dist 2 - Indiv
16 - DPMPR
2 - Unit
1 - DPME
1 - DPMQE
1 - DPMCC
6 - DPMQS
16 - DOTFM
16 - SCATBACK
13 - 21 SOS/DOV

SO PA-022

D(17)

RECORD OF EVALUATION

TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)	TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)
CH-53	Initial Qual Annual Qual	23 Oct 73	SATFY (TAC)				
CH-53	Initial TAC Qualification	22 Jan 74	LEVL 1 (TAC)				
CH-53	Requalification	1 Jul 74	Q-1 (PACAF)				
CH-53	PACAFR 51-6	20 Aug 74	Q-1				
CH-53	Instructor Upgrade	10 Jan 75	Q-1				

AF FORM 942 NOV 72 PREVIOUS EDITION IS OBSOLETE

D(18)

RECORD OF EVALUATION

TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	QUAL/STATUS (Grade)	NAME AND RANK OF FLIGHT EXAMINER	AF FORM 8 REMOVED DATE & AUTH.	IND	COMD
HH-43B	Initial Qual	1 APR 68	FE(Q)	E. PRITCHARD SSgT	AFM 60-1 13 APR 72	X	
N/A	ARRC STAN REVIEW	6 MAY 68	N/A	Roy L. CRAWFORD MAJ.	N/A	N/A	N/A
N/A	ATL ARRC STAND. REVIEW	5 Nov 68	N/A	[illegible signature]	N/A	N/A	N/A
HH-43	[illegible]	[illegible]	RFE(Q)	[illegible] MAJ	AFM 60-1 13 APR 72	X	
N/A	HQ. 40th ARRWg STAND. REVIEW	28 Apr 69	NA	[illegible signature] SMSgt	NA	NA	NA
HH-43B	Ann Prof.	23 July 69	FE(Q)	RALPH H. BUSH, MAJ	June 71 AFM 60-1	✓	
N/A	Stand Review HQ. 40th ARRWg	9 Sep 69	N/A	[illegible signature] SMSgt	N/A	N/A	N/A
N/A	STAND REVIEW HQ 40th ARRWg	24 Sept 69	N/A	Harold R. Schrader	NA	N/A	N/A
HH-43B	ANN PRO	2 SEP 70	HM (UNQ)	RONALD L. BACHMAN CAPT.	AFM 60-1 12 APR 73	X	
~~HH-43B~~	~~Ann Pro~~				—		
HH-43B	Ann Pro RE Eval	3 SEP 70	HM (Q)	RONALD L BACHMAN CAPT.	AFM 60-1 12 APR 73	X	
N/A	STAND REVIEW HQ 40th ARRWg	17 Nov 70	NA	Harold R Schrader TSgT	N/A	N/A	N/A
N/A	43 ARRSq STAND REVIEW	20 JUL 71	N/A	FRANKLIN L. CHASE MAJ	N/A	N/A	N/A
N/A	43 ARRSq STAND REVIEW	19 Oct 71	N/A	[illegible signature] Maj	N/A	—	
HH-43B	ANNUAL PROFICIENCY	15 Sep 71	HM (Q)	G.A. CAMPBELL, TSGT	AFM 60-1 1 OCT 73	✓	
CH-3	Initial Qual	25 Apr 72	Q	J.E. SMITH, TSgt	AFM 60-1 1 OCT 73	✓	
CH-3	INSTRUCTOR HELI MECH	1 Jul 72	Q	DUWAYNE CLARK, TSgt	AFM 60-1 1 OCT 73		
CH-3	PROFICIENCY (ANNUAL) No NOTICE	24 Oct 72	Q	D.L. CLARK TSgt			

AF FORM 8A MAY 65

D(19)

SIGNATURE	RANK	DATE
Martin Levendusky	CPT	25 SEP 74
Jack Muirhead Jr	CAPT	28 JAN 75 -

PACAF FORM 126 DEC 73

D (20)

CERTIFICATE OF AIRCREW QUALIFICATION

TYPE OF CHECK	AFM 60-1	MAJOR COMMAND	OTHER (Specify)	ELIGIBILITY PERIOD	DATE COMPLETED
	[ ] QUALIFICATION [ ] INSTRUMENT	[X] MISSION QUALIFICATION	PACAFR 51-6	N/A	20 Aug 74

I. EXAMINEE IDENTIFICATION

NAME (Last, First, Middle Initial)	GRADE	SSAN
MCMULLEN, GEORGE E. III	SSgt	[redacted]

ORGANIZATION/LOCATION	AIRCRAFT/CREW POSITION/CREW NUMBER (If applicable)
21SOS/Nakhon Phanom RTAFB	CH-53C/Helicopter Mechanic

II. QUALIFICATION

GROUND PHASE			FLIGHT PHASE		
EXAMINATION/CHECK	DATE	GRADE	MISSION/CHECK	DATE	TIME
Open Book	19 Aug 74	96	HM/Qualification	20 Aug 74	2.7
Closed Book	19 Aug 74	100			
Bold Face	6 Aug 74	100			

QUALIFICATION LEVEL			RESTRICTION (As applicable) (Explain in Comments Section below)	ADDITIONAL TRAINING DUE DATE(S)
1	2	3		
XXXXX			None	
EXPIRATION DATE OF QUALIFICATION: N/A				INSTRUMENT QUALIFIED: [ ] YES N/A [ ] NO

COMMENTS (If more space is required, continue on reverse)

(SEE REVERSE)

III. CERTIFICATION

I CERTIFY that I have been briefed on the recommendation below and understand the action being taken this date.

DATE	TYPED NAME AND GRADE OF EXAMINEE	SIGNATURE
AUG 24 1974	GEORGE E. MCMULLEN III, SSgt	George E. McMullen III

The above aircrew member has demonstrated [X] satisfactory [ ] unsatisfactory performance and knowledge of procedures, techniques, equipment, and directives required for the safe and successful accomplishment of his assigned flying duties.

1	CHECK AS APPLICABLE [X] REMARKS	ORGANIZATION: 21SOS	DATE: AUG 24 1974
TYPED NAME AND GRADE OF FLIGHT EXAMINER: RUSSELL J. REFFITT, SSgt		SIGNATURE: Russell J. Reffitt	
2	CHECK APPLICABLE BOX(S) [ ] REMARKS [X] CONCUR [ ] DO NOT CONCUR	ORGANIZATION: 21 SOS	DATE: AUG 24 1974
TYPED NAME AND GRADE OF REVIEWING OFFICER: CARL B. CREWS, Lt Col		SIGNATURE: Carl B. Crews	
3	CHECK APPLICABLE BOX(S) [X] REMARKS [X] CONCUR [ ] DO NOT CONCUR	ORGANIZATION: 56SOW	DATE: AUG 31 1974
TYPED NAME AND GRADE OF FINAL APPROVING OFFICER: PERRY J. DAHL, Colonel		SIGNATURE: Perry J. Dahl	

AF FORM 8 MAR 74 PREVIOUS EDITION WILL BE USED.

D(21)

1. A. MISSION DESCRIPTION. SSgt McMullen was administered his PACAFR 51-6 flight evaluation during a local area training flight. All required areas of PACAFM 60-11 were evaluated. All Bold Face Emergency Procedures were discussed on the ground and simulated in the air when feasible. Cargo sling and troop loading/unloading were simulated. This completes SSgt McMullen's Theater Indoctrination and he is certified combat ready.

B. DISCREPANCIES NOTED:

(1) SPECIAL QUALIFICATIONS, Item 4 (Q/T). SSgt McMullen used the incorrect rotor RPM baseline when figuring blade stall data. As a result, he had approximately 20 knots error in his maximum airspeed.

C. RECOMMENDED CORRECTIVE ACTIONS:

(1) During debriefing, SSgt McMullen was demonstrated the correct way to compute blade data and on three subsequent problems no discrepancies were noted. No additional action is required.

D. ADDITIONAL COMMENTS: The Wing Commander, Deputy Commander for Operations, and the Squadron Commander were present for the mission critique.

2. Reviewing Officer's Remarks: None

3. Approving Officer's Remarks: SSgt McMullen is certified Combat Ready and will perform in that status.

D(27)

REPARED 75 MAY 14 INDIVIDUAL FLIGHT RECORD AS OF 75 MAY 13 PCN N352
NONRATED (INQUIRY)

NAME: WELDON ROBERT P ASC: 9D EFFECTIVE: 74 AUG 05 FAC: CMD-ASGND: PAF CMD-ACFT: PAF ACFT/BAC: HH053C/C
GRADE: A1C CURR-ARO-RT: NO RATG ORG-RT-DT: RPI: FLY-ORGN: 0056 SQ: V CR: POI/DATE:
SSAN: [redacted] ADDN-ARO-RT: NONE ORG-RT-DT: RSA: FLT-REC-LOC: RFCV OP-LOC: RFCV BASE: NKP RTAFB THA
OSD: N/A ASD: N/A SERV-CATS: MBRS=A ACFT=A ACIP-OPS-FLYING: N/A

DATE MO DY	M/D/S	TAIL NMBR	MSN SYM	DUTY POSN	TOTAL	DAY VFR	NIGHT VFR	TRAIN SIM	NMBR OF SORTIES	LOCAL USE
0 9	CH053C	932	A7	HM	.5	.5			1	
04 19	CH053C	627		HM	3.1	3.1			1	
20	CH053C	627	A7V	HM	3.3	3.3			1	
22	CH053C	627	A7V	HM	5.0	5.0			1	
04 29	CH053C	627	02A	HM	8.0	8.0			8	
04 30	CH053C	925	A7	HM	2.7	2.7			6	
05 02	CH053C	[illegible]	A7	HM	2.5	2.5			3	
05 03	CH053C	[illegible]	A7	HM	4.0	4.0			6	
05 05	CH053C	[illegible]	A7	HM	1.3	1.3			2	
05 06	CH053C	[illegible]	A7	HM	3.2	3.2			1	
05 13	CH053C	928	T3	HM	2.5	2.5			1	
					36.1	36.1			31	

ON-RATED	TOT	CMBT	CMBT-SPT
HIS MON	[illegible]		8.0
O-DATE	17 [illegible]		13.4

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 56TH COMBAT SUPPORT GROUP (PACAF)
APO SAN FRANCISCO 96310

SPECIAL ORDER
PA- 005

12 February 1975

1. So much of para 4, SO PA-002, this Hqs, 28 Jan 75, relating to the assignment of Aviation Service Code to MAJ JOHN F. GUILMARTIN JR., [redacted] 40 ARRS, MAC, this stn, as reads: "ASC 2A", is amended to read: "ASC 5A".

2. The following named personnel, organization indicated, are assigned Aviation Service Codes as indicated with effective date indicated. Authority: AFM 60-352.

GRADE, NAME, SSAN	ASC	EFFECTIVE	ORGN
COL HARRY A. GOODALL, [redacted]	2K	11 Jul 74	56 SOW
	2A	2 Feb 75	
MAJ ROGER D. SHIELDS, [redacted]	2K	7 Feb 75	7AF
LT COL JOHN A. SUTHER, [redacted]	3K	21 Dec 74	7AF
MAJ NORMAN E. DAVIS, [redacted]	2K	16 Dec 74	3 ARRG
MAJ HUGH S. WEBBER, [redacted]	2L	16 Jun 74	56 SOW
	2K	6 Jan 75	
LT COL LEWIS G. VALE, [redacted]	3K	4 Feb 75	Det 11,1131 SAS
LT COL CLEVELAND E. FORRESTER, [redacted]	3K	6 Jan 75	3 ARRG
MAJ CLIFFORD B. FALLON, [redacted]	2K	5 Feb 75	Det NBOO, SAC
MAJ BRUCE E. GILLESPIE, [redacted]	2K	26 Mar 75	Det 11, 1131 SAS
MAJ RICHARD HENDERSON, [redacted]	2A	6 Feb 75	23 TASS
MAJ CHESTER W. GRIFFIN, [redacted]	2J	20 Feb 75	7AF
MAJ CHARLES D. VERVISCH, [redacted]	06	1 Mar 75	56 SOW
MAJ RICHARD A. RAYMOND, [redacted]	2J	20 Feb 75	3 ARRG
CAPT RICHARD T. JONES, [redacted]	1P	20 Feb 75	3 ARRG
1ST LT DAVID E. DOYLE, [redacted]	1P	20 Feb 75	Det 5, 621 TCS
MAJ GARY A. MICHELS, [redacted]	2J	20 Feb 75	7AF
MAJ WILLIS E. PEMBLETON, [redacted]	2J	20 Feb 75	Det 11, 1131 SAS
MAJ CHARLIE W. HASTINGS, [redacted]	2J	20 Feb 75	Det 11, 1131 SAS
MAJ DALE L. HENSLEY, [redacted]	2J	20 Feb 75	7AF
MAJ JOHN D. HUGHES, [redacted]	2K	12 Feb 75	Det 11, 1131 SAS
MAJ RONALD B. CHILDERS, [redacted]	1B	20 Feb 75	56 SOW
	1K	7 Mar 75	
MAJ CHARLES L. HAMBLE, [redacted]	1B	20 Feb 75	Det 11, 1131 SAS
	1K	7 Mar 75	
MAJ DARWIN N. ORRELL, [redacted]	1B	20 Feb 75	Det 11, 1131 SAS
	1K	7 Mar 75	
MAJ NORMAN L. PFEIFER, [redacted]	1B	20 Feb 75	Det 11, 1131 SAS
	1K	7 Mar 75	
CAPT ROBERT A. HESTON, [redacted]	1B	20 Feb 75	Det 11, 1131 SAS
	1K	7 Mar 75	

D(24)

GRADE, NAME, SSAN	ASC	EFFECTIVE	ORGN
CAPT PAUL R. AARNIO, [redacted]	1K	7 Mar 75	Det 11, 1131 SAS
CAPT JAMES A. ABELS, [redacted]	1K	7 Mar 75	Det 11, 1131 SAS
CAPT JOHN S. COBB, [redacted]	1K	7 Mar 75	1987 Comm Sq
CAPT RUFUS T. COBURN III, [redacted]	1K	7 Mar 75	7AF
CAPT JOHN D. GODFREY III, [redacted]	1K	7 Mar 75	Det 5, 621 TCS
CAPT RONALD W. IVERSON, [redacted]	1K	7 Mar 75	7AF
CAPT JOSEPH L. OBERLE, [redacted]	1K	7 Mar 75	Det 11, 1131 SAS
CAPT TIMOTHY P. KILLEEN, [redacted]	1K	7 Mar 75	23 TASS
CAPT LEE H. RICHEY, [redacted]	1K	7 Mar 75	Det 5, 621 TCS
CAPT LAWRENCE J. LITTLE, [redacted]	1P	1 Mar 75	23 TASS
CAPT DAVID G. ROUSSEAU JR, [redacted]	1P	15 Feb 75	40 ARRS
2D LT LEE E. WANDEL, [redacted]	1A	19 Jul 74	23 TASS
2D LT VINCENT G. MILOSEVICH, [redacted]	1A	27 Jul 74	23 TASS
MSGT BARRY SHERMAN, [redacted]	9D	24 Jul 74	21 SOS
SSGT MICHAEL C. WILSON, [redacted]	9D	5 Aug 74	21 SOS
SGT RANDY L. HOFFMASTER, [redacted]	9D	5 Aug 74	21 SOS
A1C PHILLIP A. PACK, [redacted]	9D	1 Jul 74	21 SOS
A1C ROBERT P. WELDON, [redacted]	9D	5 Aug 74	21 SOS

3. The following named officers, organization indicated, are assigned Aviation Service Code as indicated, effective 20 Feb 75. Authority: AFM 60-352.

GRADE, NAME, SSAN	ASC	ORGN
LT COL GERALD A. BLAKE, [redacted]	2J	7AF
LT COL DENZIL H. BOYD JR, [redacted]	3J	Det 11, 1131 SAS
LT COL DONALD L. BROOKS, [redacted]	3J	10 Wea Sq
LT COL RALPH L. BROWN, [redacted]	3J	Det 11, 1131 SAS
LT COL FRANK K. BRYARS, [redacted]	2J	Det NBOO, SAC
LT COL RICHARD G. CHAPPELL, [redacted]	3J	Det 11, 1131 SAS
LT COL DAVID C. CONNETT, [redacted]	2J	7AF
LT COL ROBERT R.I. CORBELL, [redacted]	3J	7AF
LT COL ALBERT F. DISANTE, [redacted]	3J	Det NBOO, SAC
LT COL NICHOLAS J. DONELSON, [redacted]	2J	7AF
LT COL SILVIO L. DORAZIO, [redacted]	3J	7AF
LT COL NORMAN H. FITZSIMMONS, [redacted]	3J	Det 11, 1131 SAS
LT COL DONALD W. GARDNER JR., [redacted]	3J	Det 11, 1131 SAS
LT COL PAUL E. GLAAB, [redacted]	2J	Det 11, 1131 SAS
LT COL JOHN F. HILGENBERG, [redacted]	2J	Det AE11, USSASQ

FOR THE COMMANDER

James W. Tate

JAMES W. TATE, Major, USAF
Chief, CBPO

DISTRIBUTION
1 - Ea Indiv, DPME, DPMQE, DPMCC
60 - DOTFM, DPMPR
10 - DPMQS
2 - Ea Unit

D(25)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 2849TH AIR BASE GROUP (AFLC)
HILL AIR FORCE BASE UTAH 84406

AERONAUTICAL ORDER
AO-107

24 July 1974

AIC ROBERT P WELDON, [redacted], 1550 CAMS/Sec A, MAC, this stn, is designated a primary crew member per AFM 35-13, para 5-4c(1), and is required to participate in frequent and regular aerial flights for an indefinite period effective 5 Aug 74 in preparation for reassignment. In-flight duties to be performed are essential to the accomplishment of the mission of the H-53 aircraft, and only flying time which is required, performed and logged aboard above specified aircraft will be creditable for pay purposes. This order remains in effect after discharge and immediate reenlistment provided there is no break in service or change in duty assignment which would change airman's flying status. Hazardous duty status code 1 is assigned. Authority: AFM 35-13, para 5-7.

FOR THE COMMANDER

BYRON F. CHRISTIANSON
Chief of Administration

DISTRIBUTION
F

AO-107

RECORD OF EVALUATION

TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)	TYPE ACFT	TYPE OF CHECK	DATE COMPLETED	SATFY/UNSATFY (Command)
CH-53	Initial Qual.	10 Dec 74	Q-1				

AF FORM 942 NOV 73 PREVIOUS EDITION IS OBSOLETE

D (27)

CERTIFICATION OF REVIEW

SIGNATURE	RANK	DATE
Lawrence E. Froehlich	1Lt	30 Jan 75

PACAF FORM DEC 73 126

D(28)

CERTIFICATE OF AIRCREW QUALIFICATION

TYPE OF CHECK	AFM 60-1	MAJOR COMMAND	OTHER (Specify)	ELIGIBILITY PERIOD	DATE COMPLETED
	☐ QUALIFICATION ☐ INSTRUMENT	☒ MISSION QUALIFICATION		NA	13 Mar 75

I. EXAMINEE IDENTIFICATION

NAME (Last, First, Middle Initial)	GRADE	SSAN
Weldon, Robert P.	AIC	[redacted]

ORGANIZATION/LOCATION	AIRCRAFT/CREW POSITION/CREW NUMBER (If applicable)
21SOS/NAKHON PHANOM RTAFB	CH-53C/Helicopter Mechanic

II. QUALIFICATION

GROUND PHASE			FLIGHT PHASE		
EXAMINATION/CHECK	DATE	GRADE	MISSION/CHECK	DATE	TIME
Open Book	4 Mar 75	92%	HM/Qualification	13 Mar 75	2.5
Closed Book	5 Mar 75	80/88%			
Bold Face	4 Mar 75	100%			

QUALIFICATION LEVEL			RESTRICTION (As applicable) (Explain in Comments Section below)	ADDITIONAL TRAINING DUE DATE(S)
1	2	3		
	XXXXXX		None	15 Apr 75
EXPIRATION DATE OF QUALIFICATION: Oct 75				INSTRUMENT QUALIFIED: ☐ YES ☐ NO

COMMENTS (If more space is required, continue on reverse)

(See Reverse)

III. CERTIFICATION

I CERTIFY that I have been briefed on the recommendation below and understand the action being taken this date.

DATE	TYPED NAME AND GRADE OF EXAMINEE	SIGNATURE
MAR 14 1975	ROBERT P. WELDON, AIC	Robert P. Weldon

The above aircrew member has demonstrated ☒ satisfactory ☐ unsatisfactory performance and knowledge of procedures, techniques, equipment, and directives required for the safe and successful accomplishment of his assigned flying duties.

		ORGANIZATION	DATE
1	CHECK AS APPLICABLE ☒ REMARKS	56SOW	MAR 14 1975
TYPED NAME AND GRADE OF FLIGHT EXAMINER: JOHN D. SELFRIDGE, SSgt		SIGNATURE: John D. Selfridge	
2	CHECK APPLICABLE BOX(S) ☐ REMARKS ☒ CONCUR ☐ DO NOT CONCUR	ORGANIZATION 21SOS	DATE MAR 19 1975
TYPED NAME AND GRADE OF REVIEWING OFFICER: JOHN H. DENHAM, Lt Colonel		SIGNATURE: John H. Denham	
3	CHECK APPLICABLE BOX(S) ☒ REMARKS ☒ CONCUR ☐ DO NOT CONCUR	ORGANIZATION 56SOW	DATE MAR 20 1975
TYPED NAME AND GRADE OF FINAL APPROVING OFFICER: LOYD J. ANDERS JR., Colonel		SIGNATURE: Loyd J. Anders	

AF FORM 8 MAR 74 PREVIOUS EDITION WILL BE USED.

D(39)

1. A. MISSION DESCRIPTION: This flight evaluation was completed during a local training mission. Pre-flight inspection was covered on the ground, along with TOLD data and the Form 365F. During the flight phase, hoist, ladder, sling, confined area work, and weapons arming/dearming were evaluated. Simulated emergencies were given, electrical failure to the hoist, and inter comm failure. All Bold Face emergency procedures were discussed on the ground and simulated in the air when feasib Tactical TOLD problems were evaluated during this flight. This evaluation was debriefe with the 21SOS NCOIC for helicopter mechanics present. I recommend AIC Weldo be certified Combat Ready.

B. DISCREPANCIES NOTED:

(1) PRE-FLIGHT, Item 2, (QT). AIC Weldon demonstrated marginal knowledge of inspection requirements, and his knowledge of equipment location is marginal.

(2) PRE-TAKEOFF, Item 4, (QT). AIC Weldon called checklist complete before co-pilots window was secure, also takeoff clearance from tower had not been received.

(3) SPECIAL QUALIFICATIONS, Item 1, (QT). During hoist work, AIC Weldon's transmissions contained extraneous information, and he was slow in getting the aircraft positioned correctly over the survivor.

(4) EMERGENCY PROCEDURES, Item 2, (QT). AIC Weldons knowledge of operating limits is marginal for engine temp and transmission torque limits.

C. RECOMMENDED CORRECTIVE ACTION:

(1) AIC Weldon should be given four (4) hours of instructor supervision ground training performing a pre-flight inspection, stressing what to look for, and equipment location. He has been thoroughly debriefed on what is expected of him during his pre-flight.

(2) AIC Weldon was debriefed on the importance, of making certain all checklist items have been completed prior to calling checklist complete. No additional corrective action is recommended.

(3) AIC Weldon was debriefed on the importance of transmitting only essential data and I recommend one training flight with an instructor emphasizing the positioning of the A/C over the survivor in minimum time.

(4) AIC Weldon was thoroughly debriefed on engine and torque limitations. Recommend AIC Weldon be given one (1) hour of ground training, supervised by an instructor, covering aircraft limitations with emphasis on engine and torque limitations.

D. ADDITIONAL COMMENTS: The Wing Commander, Deputy Commander for Operations and Squadron Commander were present for the mission summary.

2. Reviewing Officer's Remarks: NONE

3. Approving Officer's Remarks: AIC Weldon is certified Combat Ready in the CH-53 aircraft.

D(30)

4. Corrective Action Completed:

a. On 15 APR 75, AIC Weldon demonstrated adequate and in depth knowledge on how to perform a pre-flight inspection and equipment location to Sgt Vernon A. Paul.

b. On 15 APR 75, AIC Weldon flew a local training flight with Sgt Vernon A. Paul and demonstrated correct voice and hoist procedures.

c. On 21 MAR 75, AIC Weldon demonstrated adequate knowledge of aircraft limitations to Sgt Earnest W. Credit

John H. Denham
JOHN H. DENHAM, Lt Colonel, USAF
Commander

D (31)

DOD INTERNATIONAL FLIGHT PLAN

PRIORITY INDICATOR | ADDRESSEE(S) INDICATOR(S)

FILING DATE TIME | ORIGINATOR INDICATOR

SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR

3 MESSAGE TYPE: (FPL — 7 AIRCRAFT IDENTIFICATION: 01-3 KNIFE — 8 FLT RULES AND STATUS: I

9 NO. AND TYPE A/C: H-53 — 10 COM / NAV / EQUIPMENT: R / R / J

13 AERODROME OF DEPARTURE AND TIME: VTUW 1330 → FIR BOUNDARIES AND ETA OVER: NONE

15 SPEED AND LEVEL: Ø110FØ80 → ROUTE: W6 KRT BUT

17 AERODROME OF DESTINATION AND ETA: VTBU 1640 → ALTERNATE AERODROME(S): NR

18 OTHER INFORMATION

) ≤≡

NOT FOR TRANSMISSION

SUPPLEMENTARY INFORMATION

19 ENDURANCE — FUEL/Ø43Ø → PERSONS ON BOARD — PОB/4 → RDO/ — EMERGENCY AND SURVIVAL EQUIPMENT 121.5 → 243 → 5... → 8364

TYPE OF EQUIPMENT: POLAR → DESERT → MARITIME → JUNGLE → GLOBAL → LIFE JACKETS: JACKETS → LIGHT → FLUORESCEIN → RADIO FREQ.

DINGHIES: NUMBER / TOTAL CAPACITY / COLOR → COVER → OTHER EQUIPMENT: RMK/ FLARES

REMARKS: Form F on file 21 505

AIRCRAFT SERIAL NUMBERS AND TYPE OF AIRCRAFT IN FLIGHT: 68-10933

CREW LIST ☐ ATTACHED ☑ LOCATED AT: 21 505

PASSENGER MANIFEST ☐ ATTACHED ☒ LOCATED AT: 56 SOW

AIRCRAFT HOME STATION OR ORGANIZATION: VTUW

NAME OF PILOT IN COMMAND/INSTRUMENT RATING: KAYS

SIGNATURE OF PILOT IN COMMAND OR DESIGNATED REPRESENTATIVE: James M Kays

PILOT'S PREFLIGHT CHECK	BASE OPERATIONS USE		
✓ NOTAMS	✓ CURRENT F/FCIC CARD	F P L	APPROVAL
✓ AIR SPACE RESTRICTIONS	SPECIAL BRIEFINGS		REQUEST CLEARANCE AFTER (Z)
✓ AIRCRAFT/DEST NAV AIDS	DIP CLNC/US CODE/PPR		MISSION/CONTROL AUTHORITY
✓ WEATHER AND WINDS	BZ FLT/CAT/OAT	T A	
✓ SIDS, FLIPS AND CHARTS	VIP CODE/BLOCK TIME	T W R	
✓ FLIGHT PLAN LOG	PAX MANIFEST		
✓ POINT REFER REPORTS	CUSTOMS FORM		SIGNATURE OF APPROVING AUTHORITY: James M Kays
✓ FOREIGN CLNC GUIDE	FLT ORDERS OR CREW LIST		
✓ COMMAND LOCAL DIRECTIVES	FUEL REQUIREMENTS		

INBOUND/OUTBOUND TRAFFIC LOG — MAY 13 1975

I/V	CALL SIGN	TYPE	[illegible] / TO	ETA / ETD	ATA / ATD	[illegible] / M	TWI	MK	CP	DISP	REMARKS
I	SCATBACK "A"	T 39	VTUN	2310	23 31	JF / AF	[illegible] / GT	/	V	DH / [illegible]	
I	[illegible]	[illegible]	RODN	0900	08 56	JF / AF	LC / LC			SH / GG	
I	[illegible]	C141	RPMK	0900	08 59	[illegible] / AB	LC / LC			SH / DG	
I	SCATBACK "B"	T-39	VTBU	0830	0830	[illegible] / AF	LC / LC		✓	SH / JR	
I	KLONG 951	C130	VTUD	0900	08 55	AF / DF	LC / LC			PG / DG	
I	NAIL 13	OV10	VTUD	1230	13 15	AB / AB	JP / JB		✓	DG / DG	
V	J.G. O.A.	3 HH53	VTBU	1245	13 12	AB / AB	JP / JP			PG / DG	
I	KNIFE "01"	3 HH53	VTBU	1330	13 33 / 14 04 / 13 57	AB / AB	JP / MA		✓ ✓	DG / DG	←
I	KNIFE 03	4 HH53	VTBU	—	1502 / 1501 / [illegible]	AB	JP / JB		✓✓✓	PG / DG	
I	SCATBACK B	T39	VTBU	1330	13 34	AB / AB	JE / MA		✓	PG / DG	
I	KLONG 975	C130	VTBU	1833	1846	TS / —	[illegible] / —	—	✓	RD / —	
I	KNIFE 02-1	H53	VTBU	1800	1820 / [illegible]	TS / TS	CT / CT		✓	RD / RD	

E(2)

The following passengers were seated on the floor of the cargo compartment facing inboard, and received fatal injuries upon ground impact. Survival was not possible.

	NAME	GRADE	SSAN
1.	BLACK, JIMMY P.	SGT	[redacted]
2.	COLLUMS, BOBBY G.	SGT	
3.	COYLE, GERALD A.	SSGT	
4.	DWYER, THOMAS D.	SGT	
5.	FORD, BOB W.	SGT	
6.	FRITZ, GERALD W.	SGT	
7.	GLENN, JACKIE D.	TSGT	
8	HAMILIN, DARRELL L.	SGT	
9.	HANKAMER, GREGORY L.	SGT	
10.	HIGGS, DAVID A.	SGT	
11.	ILAOA, FALEAGAFULU	SSGT	
12	LANE, MICHAEL D.	SGT	
13	LONDON, DENNIS W.	A1C	
14.	MATHIAS, ROBERT P.	A1C	
15.	MCKELVEY, WILLIAM R.	SGT	
16	MORAM, EDGAR C. II	A1C	
17	NEALIS, TOMMY R.	A1C	
18.	RABER, PAUL J.	SGT	
19.	ROSS, ROBERT W.	SGT	

21ST FLIGHT ORDER/MISSION CLEARANCE

[illegible] IN COMMAND/FLIGHT COMMANDER/FLIGHT LEADER	RAG NUMBER	TYPE AIRCRAFT	MISSION	EFFECTIVE ON OR ABOUT	RETURN ON OR ABOUT	ORDER NUMBER	DATE
		CH-53C		13 May 75	23 May 75	[illegible]	[illegible]

NAME	RANK	SSAN	CR POS	ACFT NO	CALL SIGN	HR FUEL	ETD	ETE	CIF	SIGNATURE
[illegible] J.R.	[illegible]	[redacted]	[illegible]	933	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[signature]
[illegible]	[illegible]	[redacted]	CP	"	"	"	"	"	"	
[illegible], G.R., III	[illegible]	[redacted]	[illegible]	"	"	"	"	"	"	
[illegible]	[illegible]	[redacted]	"	"	"	"	"	"	"	

[illegible] FROM	TO (Variations in itinerary authorized)	AUTHENTICATING OFFICIAL	SIGNATURE
[illegible]	[illegible]	[illegible]	[signature]

[illegible] 0-132

[illegible] THAILAND - [illegible]

KNIFE 01-3

1410 - Invert, Knife One dash Three level at 9 thousand.
- Hello, Knife One dash Three Invert sixteen radar contact, radar monitor.
- Knife One dash Three, Roger.

1411 -

1412 -

1413 -

1414 -

1415 -

1416 - Knife Zero One dash Three, Invert.
- Knife One dash three, Invert.
- Knife one dash three, Invert.

1417 -

1418 - Invert, Invert Knife one dash two.
- Knife one dash two this is Invert Sixteen Radar C Radar Monitor.
- One dash two.
- And Knife one dash two, would you try to contact Knife one dash three? we're having a little trouble talking to him.
- Roger Sir, wilco.

1419 -

1420 - Invert, Invert, one dash two.
- Go ahead one dash two.
- Roger Sir unable to contact one dash three on uniform frequency at this time. (Garble)
- Roger sir, thank you.

1421 - Knife one, Knife one, Invert.
- Knife zero one go.
- Ah Roger sir you haven't had any contact with Knife one dash three, have you? We seem to have lost radio contact with him.
- Negative. We haven't. We'll try.
- Invert (Garbled)
- Invert's on, go ahead.
- Ah Roger this is one dash two are you showing radar contact with one dash three?
- Thats a negative sir.

F (1)

1422 - Ah this is one two. Can you give us an idea of how much in advance he was of us?
- Ah maybe five minutes.
- Ah was he scheduled to ah fly out to ah these various points and then ~~new~~ straight on down to U-Tapao.
- Ah yes sir I think that is affirmative.
- Ah right sir. Well ah we lost, we lost radar and radio contact with him ah just a little bit farther out than you are right now.

1423 - Knife zero one dash three knife zero one dash one this is Invert on guard If your copy come up 292.3 292.3. Invert out.

1424 - Invert, Knife zero one has negative contact with one dash three.
- Roger ah, thank you. Zero one ah, I'm showing you how on the two three two radial for one hundred miles offour house, does that check?
- Right sir that checks.
- Roger sir thank you.
- Invert, knife one dash two.
- Go ahead one dash two.

1425 - Roger sir ah could you try to pinpoint our position when we reach the spot you lost, radar contact with one dash three.
- Ah, Roger sir ah, you're pretty close right now.
- Ah we, we, can't seem to ah raise him on radios and ah no one else seems to be talking to him either at the moment.
- Roger sir we just passed a fire at nine oclock.
- Ah Roger sir, you might want to hold up for a minute here and let us check this out.
- Knife zero one dash two copies sir.
- Zero one dash two will be holding in an orbit and we'll go over and see if we can get a closer look at the fire from our present altitude.
- Roger

1426 - Knife zero one, contact Korat 271.2, 271.2 - Knife zero one.
- 271.2 roger.

1427 - Invert, Invert, Knife one dash two.
- Go ahead one dash two.
- Ah Roger sir we're in the vicinity of one sighting We'd like to ah drop on down to about ah four thousand feet at this time.

1428 - Ah Roger sir we show no other traffic in the area at this time. Ah maintain ~~level~~ VMC.
- Ah roger sir, and keep us of advised of any traffic in the area, if you would please.
- Roger.

1429 -

1430 -

F (2)

1431 - Invert, Invert knife dash two.
- Go ahead one dash two.
- Ah roger sir were presently at 4 M we've got the fire in sight and-ah appears to (Garbled) on the fire of some sort. Ah were gonna descend on down another thousand feet. See what he can find.
- Ah Roger sir ah I'm showing the minimum safe altitude in that area as 4500 feet, ah do you have some better, better charts that you ah can tell what what your minimum safe altitude is shown. there.
- Ah roger sir we have then on board. We'll go ahead ah level off at 4 and see what we can find here. I haven't Got a chart out at this time.
- Ah, right sir.

1432 - Invert, Invert one dash two.
- Go ahead one dash two.
- Ah roger sir it appears that ah we got (Cut Out) like, it might be ammo.
- Roger
- Invert, Invert one dash two.
- Go one dash two.
- Ah roger sir, it appears as if we got a flare. One of the flares that was or the aircraft going off this time.
- copy

1433 - Have we got any other aircraft in the area, ah, a little bit lighter than we are.
- Say again please.
- Say again Invert.
- Roger would you repeat your last ah transmission.
- Ah roger sir, have we got any aircraft available that's light enough. We're awfully heavy to go down any lower and ~~wall~~ mess around close to the trees.
- Ah roger sir, maintain your altitude ah were talking with JRCC right now.

1434 -

1435 -

1436 - Knife one dash two, Invert.
- Invert one dash two go.
- Ah roger sir. It looks like there scrambling off some jollys at this time ah I dont know whether there going to want you to hold out there or move on or what. Ah what are your intentions at this time?
- Invert one dash two go ahead sir.
- Ah roger one dash two ah they are scrambling off some Jollys and ah what are your intentions. Can you stay in the area or are you going to have to move on or what.

F (3)

1437 -

1438 - Invert Invert one dash two.
- Go ahead sir.
- Ah roger sir ah we've advised by our command post that ah he'll be ah working joker at this time. We'd like to leave your frequency and go 28 28 and if you have any info you want to pass to us would please call on guard.
- Ah roger sir standby one.

The above transcript was compiled by me from the relevent tapes and is a full and accurate transcript to the best of my knowledge.

DAVID A. FORD, 2Lt USAF
Duty Controller

Subscribed and sworn before me, this 29th day of May 1975

JOHN F. GUILMARTIN, JR., Major USAF
Investigating Officer

F(4)

FLIGHT WEATHER BRIEFING

I. MISSION

DEP/ETD	DES/ETA	ALTN/ETA	BRIEFING NO.	DATE	ACFT/NUMBER
1400 Z	1630 Z	— Z	—	13 MAY 75	H53/[illegible]

II. TAKEOFF DATA

RUNWAY TEMP	DEWPOINT	SFC WIND	TEMP DEV	PRESSURE ALT	DENSITY ALT	RCR
25 °C	22 °C	2005	— °C	+750 FT	— FT	—

CLIMB WINDS: 1310

LOCAL WEA WARNING OR MET WATCH ADVISORY: MWA #1 05-21

REMARKS/TAKEOFF ALTN FCST:

TSTMS LOCAL AREA

III. ENROUTE DATA

FLT LEVEL: 040

FLT LEVEL WINDS/TEMP: 2010 / +20 2

CLOUDS AT FLT LEVEL: ☐ YES ☐ NO ☒ IN AND OUT

MINIMUM VISIBILITY AT FLT LEVEL OUTSIDE CLOUDS _____ MILES, DUE TO: ☐ SMOKE ☐ DUST ☐ HAZE ☐ FOG ☒ PRECIPITATION ☐ NO OBSTRUCTION

MINIMUM CEILING	LOCATION	MAXIMUM CLOUDS TOPS	LOCATION	MINIMUM FREEZING LEVEL	LOCATION
15000 FT AGL	AT TSTMS	160 FT MSL	OVER RT	145 FT MSL	UTUW

THUNDERSTORMS (within fifty miles of route)

MAWA NO. 13/05-21

☐ NONE ☒ AREA ☐ LINE

- ISOLATED 1-2%
- SCT 3-15%
- ☒ SCATTERED 16-45%
- NUMEROUS-MORE THAN 45%

HAIL, SVR TURB, SEVERE ICING, AND PRECIPITATION EXPECTED IN NEAR TSTMS.

TURBULENCE (within ten miles of route not associated with TSTMS)

CAT ADVISORY _____ Z

	IN CLEAR	IN CLOUD
☒ NONE		
LIGHT		
MOD		
SVR		
EXTREME		

LEVELS: _____

ICING (within ten miles of route not associated with TSTMS)

☒ NONE

	RIME	MIXED	CLEAR
TRACE			
LIGHT			
MOD			
SVR			

LEVELS: _____

PRECIPITATION (within ten miles of route not associated with TSTMS)

NONE

	DRIZ	RAIN	SNOW	SLEET
LIGHT				
MOD				
HEAVY				

☒ FRZG

LOCATION: ENTIRE RTE

AND

LOCATION: UTUW – VIUN

LOCATION

LOCATION

IV. TERMINAL FORECASTS

DESTINATION	CLOUD LAYERS	VIS/WEA	SFC WIND	ALTIMETER	VALID TIME
UTUW	2 C U020 2 AC 140	7	23005	2968 INS	1530 Z TO 1730 Z
ALTERNATE				INS	Z TO Z
INTMED STOP				INS	Z TO Z
INTMED STOP				INS	Z TO Z

V. COMMENTS/REMARKS

VI. BRIEFING RECORD

BRIEFED ON LATEST RCR FOR DEST AND ALTN: ☐ YES ☒ NOT AVAILABLE

REQUEST BRIEF AT 1515Z

SEE FLIMSY NO.	WEA BRIEFED	FORECASTER'S SIGNATURE	VOID TIME	Z
	1530 Z		EXTENDED TO	Z
			WEA REBRIEFED AT	Z
			FORECASTER'S INITIALS	
WEA FCSTR	TAPE NO.	START Z / STOP Z / PHONE CHARGE	NAME OF PERSON RECEIVING BRIEF	

AFFIDAVIT

TESTIMONY OF MAJOR JOHN M CALLAGHAN, [redacted]

There was no formal weather briefing given to the crew. 175-1s were prepared to be given to the crews by the duty officer, LtC Jenkins. LtC Jenkins was shown the FPS-41 radar which indicated two areas of severe weather 20-40 miles SW of NKP and 120-150 miles SW of NKP on the direct route to Korat. I suggested if they had to deviate that they should go to the south. I also told him that they could get further information on the heavy weather by calling us on PMSV. At no time did the aircraft directly contact base weather before or after takeoff. The estimated weather at the time and place where the aircraft crashed was 030 SCTD 110 BRKN 300 OVC 7 CONL RA-. Radar indicated that there was no convective activity in the area from 260 to 285 degrees 30 to 50 miles from NKP.

JOHN M CALLAGHAN, Maj, USAF
OIC, Base Weather Station

Subscribed and sworn before me, this 28th day of May 1975.

JOHN F GUILMARTIN, JR., Maj, USAF
Investigating Officer

A (11)

AFFIDAVIT

Testimony of Capt. Lary A. Robinson, [redacted]
Chief, Aeromedical Services

After complete review of the medical records of the crewmembers of Knife 01-3 which crashed 13 May 75, and as their flight surgeon, I find no evidence of physical or mental illness nor evidence of alcohol or drug addiction present in any of these airmen.

Lary A. Robinson, MD.
LARY A. ROBINSON, CAPT, USAF, MC, FS

Subscribed and sworn before me, this 2nd day of June, 1975.

JOHN F. GUILMARTIN, Jr., MAJOR, USAF
Investigating Officer

#(11)

MEDICAL RECOMMENDATION FOR FLYING DUTY

(Do not use for diagnosis for other than medical use o

TO: COMMANDER: 21 SOS
APO SF 96310

FROM: 56 USAF HOSP
APO SF 96310

HOSP CODE (1-4): 2N57

1. LAST NAME-FIRST NAME-MIDDLE INITIAL: KANG, JAMES C.

7. GRADE: O 3

7A. GRADE (5-6): 03

8. AGE (7-8): 25

2. CERTIFICATE

[X] (FOR INCOMING FLYING PERSONNEL ONLY) I CERTIFY THAT I AM ON FLYING STATUS ACCORDING TO CURRENT ORDERS AND THAT I HAVE HAD NO ILLNESS OR INJURY SINCE LEAVING MY LAST STATION, EXCEPT AS RECORDED BELOW.

[X] I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATIONS BELOW AND UNDERSTAND THE ACTION BEING TAKEN THIS DATE.

I HAVE BEEN OFFICIALLY NOTIFIED THIS DATE THAT:

[ ] I HAVE BEEN GROUNDED (OR EXCUSED) BECAUSE OF PHYSICAL DISQUALIFICATION FOR FLYING DUTY.

[X] I AM PHYSICALLY QUALIFIED FOR FLYING DUTY.

9. SSAN (9-17): [redacted]

10. ORGN AND MAJOR COMD OF ASGN: 21 SOS (PACAF)

10A. COMD OF ASGN (18): 7

SIGNATURE OF FLYER: James C Kang 1LT

11. RATING DESG OF FLYING DUTY: Pilot

12. COMBAT AIRCREW MEMBER: [ ] YES [X] NO

11A. RATING (19): C

12A. COMBAT (20): 2

13. FLYING CATEGORY: Unconditional Flying

14. ACTUAL DATE FOUND MEDICALLY INCAPACITATED TO FLY: --

13A. CAT (21): 1

14A. DATE (22-25): --

15. MONTH IN WHICH FLT RQMTS WERE LAST MET: Dec 74

16. EST DURATION OF INCAPACITY TO FLY: --

3. CLEARANCE FOR FLYING DUTY IS GIVEN UNDER THE FOLLOWING CIRCUMSTANCES:

[X] REPORTING TO A NEW STATION

[ ] ANNUAL MEDICAL EXAMINATION

[ ] OTHER REQUIREMENT FOR CLEARANCE (Specify)

17. SERIOUS ILLNESS, IF "YES", ATTACH SF 88: [ ] YES [X] NO

18. FLYING WITH WAIVER: [ ] YES [X] NO

19. TOTAL FLYING TIME (26-29): 2100

20. GLASSES WILL BE WORN WHILE PERFORMING THOSE DUTIES REQUIRING CORRECTED VISUAL ACUITY: [ ] YES [ ] NO [X] NA

21. TOTAL DAYS. (No. of days from actual date of incapacitation (Item 14) to date of certification by competent authority as physically qualified to fly) →

21. TOTAL DAYS (30-32):

4. DATE FLIGHT CLEARANCE EXPIRES: 31 Oct 75

22. DAYS DURATION IN MEDICAL FACILITY (Use figure from AF Form 565 "Total to Date") →

22. DAYS IN FACILITY (33-35):

5. INDIVIDUAL PRESENTLY SUSPENDED BY

AERO ORDER NO.

HEADQUARTERS

PARAGRAPH NO.

DATE

6. COMPETENT CERTIFYING AUTHORITY (When box 4, 5, or 6, of item 23 is circled, indicate authority to certify as physically qualified)

[ ] BASE [ ] NO. AIR FORCE [ ] MAJOR COMD [ ] HQ USAF

23. TYPE OF ACTION RECOMMENDED	YEAR AND MONTH	CIRCLE ONE (36)
EXCUSAL NOT TO EXTEND BEYOND LAST DAY OF		1
GROUNDING NOT TO EXTEND BEYOND LAST DAY OF		2
SUSPENSION AS OF FIRST DAY OF		3
REMOVAL OF EXCUSAL		4
REMOVAL OF GROUNDING		5
REMOVAL OF SUSPENSION		6

24. P	U	L	H	E	S	
1	1	1	1	1	1	W

REMARKS

DATE: 10 Dec 75

TYPED/PRINTED NAME AND GRADE OF FLIGHT SURGEON OR FLIGHT MEDICAL OFFICER: LARY A. ROBINSON, CAPT, USAF, MC, FS

SIGNATURE: [signature]

25. DIAGNOSIS (State most serious condition first. Specify resultant conditions from any diagnosis.

CODES (PRIMARY DG ONLY)

DG (37-40):

CA (44-47):

C-1027

AF FORM 1042 NOV 7 PREVIOUS EDITION WILL BE USED.

ff(2)

MEDICAL RECOMMENDATION FOR FLYING DUTY

(Do not use for diagnosis for other than medical use of this form)

TO: CNDR 21 SOS
APO SF 96210

FROM: 56 USAF HOSP (SGPF)
APO SF 96310

HOSP CODE (1-4): T357

1. LAST NAME-FIRST NAME-MIDDLE INITIAL: FROMLICH, LAURENCE EUGENE

7. GRADE: 1Lt

7A. GRADE (5-6): 02

8. AGE (7-8): 24

9. SSAN (9-17): [redacted]

2. CERTIFICATE

☐ (FOR INCOMING FLYING PERSONNEL ONLY) I CERTIFY THAT I AM ON FLYING STATUS ACCORDING TO CURRENT ORDERS AND THAT I HAVE HAD NO ILLNESS OR INJURY SINCE LEAVING MY LAST STATION, EXCEPT AS RECORDED BELOW.

☑ I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATIONS BELOW AND UNDERSTAND THE ACTION BEING TAKEN THIS DATE.

I HAVE BEEN OFFICIALLY NOTIFIED THIS DATE THAT:

☐ I HAVE BEEN GROUNDED (OR EXCUSED) BECAUSE OF PHYSICAL DISQUALIFICATION FOR FLYING DUTY.

☐ I AM PHYSICALLY QUALIFIED FOR FLYING DUTY.

10. ORGN AND MAJOR COMD OF ASGN: 21 SOS (PACAF)

10A. COMD OF ASGN (18): R

11. RATING DESG OR FLYING DUTY: Pilot

12. COMBAT AIRCREW MEMBER: ☐ YES ☑ NO

11A. RATING (19): C

12A. COMBAT (20): 2

13. FLYING CATEGORY: 1A

14. ACTUAL DATE MEDICALLY INCAPACITATED TO FLY: 18 Apr 75

13A. CAT (21): 1

14A. DATE (22-25): 75[illegible]

SIGNATURE OF FLYER: [signature]

15. MONTH IN WHICH FLT RQMTS WERE LAST MET: Mar 75

16. EST DURATION OF INCAPACITY TO FLY: 5 Days

3. CLEARANCE FOR FLYING DUTY IS GIVEN UNDER THE FOLLOWING CIRCUMSTANCES:

☐ REPORTING TO A NEW STATION

☐ ANNUAL MEDICAL EXAMINATION

☐ OTHER REQUIREMENT FOR CLEARANCE (Specify)

17. SERIOUS ILLNESS, IF "YES", ATTACH SF 88: ☐ YES ☑ NO

18. FLYING WITH WAIVER: ☐ YES ☑ NO

19. TOTAL FLYING TIME (26-29): 0250

20. GLASSES WILL BE WORN WHILE PERFORMING THOSE DUTIES REQUIRING CORRECTED VISUAL ACUITY: ☐ YES ☐ NO ☑ NA

21. TOTAL DAYS. (No. of days from actual date of incapacitation (Item 14) to date of certification by competent authority as physical qualified to fly): 007

4. DATE FLIGHT CLEARANCE EXPIRES

22. DAYS DURATION IN MEDICAL FACILITY (Use figure from AF Form 565 "Total to Date"): 000

22. DAYS IN FCL TY (33-35): 000

5. INDIVIDUAL PRESENTLY SUSPENDED BY

AERO ORDER NO.

HEADQUARTERS

PARAGRAPH NO.

DATE

6. COMPETENT CERTIFYING AUTHORITY (When box 4, 5, or 6, of item 23 is circled, indicate authority to certify as physically qualified)

X BASE | NO. AIR FORCE | MAJOR COMD | HQ USAF

23. TYPE OF ACTION RECOMMENDED	YEAR AND MONTH	CIRCLE ONE (36)
EXCUSAL NOT TO EXTEND BEYOND LAST DAY OF		1
GROUNDING NOT TO EXTEND BEYOND LAST DAY OF		2
SUSPENSION AS OF FIRST DAY OF		3
REMOVAL OF EXCUSAL		4
REMOVAL OF GROUNDING		5
REMOVAL OF SUSPENSION		6

REMARKS

24. P	U	L	H	E	S	
1	1	1	1	1	1	W

DATE: 25 Apr 75

TYPED/PRINTED NAME AND GRADE OF FLIGHT SURGEON OR FLIGHT MEDICAL OFFICER: ALFRED K. CHENG, COL, USAF, MC, SFS.

SIGNATURE: [signature]

25. DIAGNOSIS (State most serious condition first. Specify resultant conditions from any diagnosis.

CODES (PRIMARY DG ONLY)

DG (37-40):

CA (44-47):

AF FORM 1042 NOV 71 PREVIOUS EDITION WILL BE USED. C-1027

H(3)

MED[illegible] RECOMMENDATION FOR FLYING DU[illegible]

(Det[illegible] diagnosis for other than medical use of

TO: [illegible]

FROM: [illegible] (PACAF)

HOSP CODE (1-4): [illegible]

1. LAST NAME-FIRST NAME-MIDDLE INITIAL: [illegible], GLADYS F. III

7. GRADE: [illegible]

7A. GRADE (5-6): [illegible]

8. AGE (7-8): [illegible]

2. CERTIFICATE

☐ (FOR INCOMING FLYING PERSONNEL ONLY) I CERTIFY THAT I AM ON FLYING STATUS ACCORDING TO CURRENT ORDERS AND THAT I HAVE HAD NO ILLNESS OR INJURY SINCE LEAVING MY LAST STATION, EXCEPT AS RECORDED BELOW.

☐ I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATIONS BELOW AND UNDERSTAND THE ACTION BEING TAKEN THIS DATE.

I HAVE BEEN OFFICIALLY NOTIFIED THIS DATE THAT:

☐ I HAVE BEEN GROUNDED (OR EXCUSED) BECAUSE OF PHYSICAL DISQUALIFICATION FOR FLYING DUTY.

☒ I AM PHYSICALLY QUALIFIED FOR FLYING DUTY.

9. SSAN (9-17): [redacted]

10. ORGN AND MAJOR COMD OF ASGN: 21 MOS (PACAF)

10A. COMD OF ASGN (18):

11. RATING DESG OR FLYING DUTY: Flt Eng

12. COMBAT AIRCREW MEMBER: ☐ YES ☐ NO

11A. RATING (19):

12A. COMBAT (20):

13. FLYING CATEGORY: 9D

14. ACTUAL DATE FOUND MEDICALLY INCAPACITATED TO FLY: 30 Apr 75

13A. CAT (21):

14A. DATE (22-25): 75[illegible]

SIGNATURE OF FLYER: [illegible]

15. MONTH IN WHICH FLT RQMTS WERE LAST MET: Mar 75

16. EST DURATION OF INCAPACITY TO FLY: 7 Days

3. CLEARANCE FOR FLYING DUTY IS GIVEN UNDER THE FOLLOWING CIRCUMSTANCES:

☐ REPORTING TO A NEW STATION

☐ ANNUAL MEDICAL EXAMINATION

☐ OTHER REQUIREMENT FOR CLEARANCE (Specify)

17. SERIOUS ILLNESS, IF "YES", ATTACH SF 88: ☐ YES ☐ NO

18. FLYING WITH WAIVER: ☐ YES ☐ NO

19. TOTAL FLYING TIME (26-29): [illegible]

20. GLASSES WILL BE WORN WHILE PERFORMING THOSE DUTIES REQUIRING CORRECTED VISUAL ACUITY: ☐ YES ☐ NO ☐ NA

21. TOTAL DAYS. (No. of days from actual date of incapacitation (Item 14) to date of certification by competent authority as physically qualified to fly): [illegible]

21. TOTAL DAYS (30-32): [illegible]

4. DATE FLIGHT CLEARANCE EXPIRES:

22. DAYS DURATION IN MEDICAL FACILITY (Use figure from AF Form 565 "Total to Date"): [illegible]

22. DAYS IN FACILITY (33-35): [illegible]

5. INDIVIDUAL PRESENTLY SUSPENDED BY

AERO ORDER NO.:

HEADQUARTERS:

PARAGRAPH NO.:

DATE:

6. COMPETENT CERTIFYING AUTHORITY (When box 4, 5, or 6, of item 23 is circled, indicate authority to certify as physically qualified)

☐ BASE ☐ NO. AIR FORCE ☐ MAJOR COMD ☐ HQ USAF

23. TYPE OF ACTION RECOMMENDED	YEAR AND MONTH	CIRCLE ONE (36)
EXCUSAL NOT TO EXTEND BEYOND LAST DAY OF		1
GROUNDING NOT TO EXTEND BEYOND LAST DAY OF		2
SUSPENSION AS OF FIRST DAY OF		3
REMOVAL OF EXCUSAL		4
REMOVAL OF GROUNDING		5
REMOVAL OF SUSPENSION		6

REMARKS

24. P	U	L	H	E	S	
1	1	1	1	1	1	V

DATE: [illegible]

TYPED/PRINTED NAME AND GRADE OF FLIGHT SURGEON OR FLIGHT MEDICAL OFFICER: ALFRED E. CHIZIC, COL, USAF, MC, SFS

SIGNATURE:

25. DIAGNOSIS (State most serious condition first. Specify resultant conditions from any diagnosis.

CODES (PRIMARY DO ONLY)

DG (37-40):

CA (44-47):

AF FORM 1042 NOV 7[illegible] PREVIOUS EDITION WILL BE USED.

C-1027

4(4)

MED[illegible] RECOMMENDATION FOR FLYING DU[illegible]

(Det [illegible] Diagnosis for other than medical use of [illegible])

TO: [illegible] FROM: 56 USAF HOSP (USAFE) [illegible] HOSP CODE (1-4)

1. LAST NAME-FIRST NAME-MIDDLE INITIAL	7. GRADE	7A. GRADE (5-6)	8. AGE (7-8)
[illegible], GEORGE F. SSG	[illegible]	[illegible]	[illegible]

2. CERTIFICATE

☐ *(FOR INCOMING FLYING PERSONNEL ONLY)* I CERTIFY THAT I AM ON FLYING STATUS ACCORDING TO CURRENT ORDERS AND THAT I HAVE HAD NO ILLNESS OR INJURY SINCE LEAVING MY LAST STATION, EXCEPT AS RECORDED BELOW.

☐ I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATIONS BELOW AND UNDERSTAND THE ACTION BEING TAKEN THIS DATE.

I HAVE BEEN OFFICIALLY NOTIFIED THIS DATE THAT:

☒ I HAVE BEEN GROUNDED (OR EXCUSED) BECAUSE OF PHYSICAL DISQUALIFICATION FOR FLYING DUTY.

☐ I AM PHYSICALLY QUALIFIED FOR FLYING DUTY.

SIGNATURE OF FLYER: [signature]

3. CLEARANCE FOR FLYING DUTY IS GIVEN UNDER THE FOLLOWING CIRCUMSTANCES:

☐ REPORTING TO A NEW STATION

☐ ANNUAL MEDICAL EXAMINATION

☐ OTHER REQUIREMENT FOR CLEARANCE *(Specify)*

4. DATE FLIGHT CLEARANCE EXPIRES

5. INDIVIDUAL PRESENTLY SUSPENDED BY

AERO ORDER NO.

HEADQUARTERS

PARAGRAPH NO.

DATE

6. COMPETENT CERTIFYING AUTHORITY *(When box 4, 5, or 6, of Item 23 is circled, indicate authority to certify as physically qualified)*

☐ BASE ☐ NO. AIR FORCE ☐ MAJOR COMD ☐ HQ USAF

9. SSAN (9-17)	[redacted]
10. ORGN AND MAJOR COMD OF ASGN	22 SOS (PACAF)
10A. COMD OF ASGN (18)	
11. RATING DESG OF FLYING DUTY	Flt Eng
11A. RATING (19)	
12. COMBAT AIRCREW MEMBER	☐ YES ☒ NO
12A. COMBAT (20)	
13. FLYING CATEGORY	93
13A. CAT (21)	
14. ACTUAL DATE FOUND MEDICALLY INCAPACITATED TO FLY	15 Mar 75
14A. DATE (22-25)	
15. MONTH IN WHICH FLT RQMTS WERE LAST MET	Mar 75
16. EST DURATION OF INCAPACITY TO FLY	7 Days
17. SERIOUS ILLNESS, IF "YES", ATTACH SF 88	☐ YES ☒ NO
18. FLYING WITH WAIVER	☐ YES ☒ NO
19. TOTAL FLYING TIME (26-29)	
20. GLASSES WILL BE WORN WHILE PERFORMING THOSE DUTIES REQUIRING CORRECTED VISUAL ACUITY	☐ YES ☐ NO ☒ NA
21. TOTAL DAYS. *(No. of days from actual date of incapacitation (Item 14) to date of certification by competent authority as physically qualified to fly)* →	
21. TOTAL DAYS (30-32)	[illegible]
22. DAYS DURATION IN MEDICAL FACILITY *(Use figure from AF Form 565 "Total to Date")* →	
22. DAYS IN FACILITY (33-35)	[illegible]

23. TYPE OF ACTION RECOMMENDED	YEAR AND MONTH	CIRCLE ONE (36)
EXCUSAL NOT TO EXTEND BEYOND LAST DAY OF		1
GROUNDING NOT TO EXTEND BEYOND LAST DAY OF		2
SUSPENSION AS OF FIRST DAY OF		3
REMOVAL OF EXCUSAL		4
REMOVAL OF GROUNDING		5
REMOVAL OF SUSPENSION		6

24. P	U	L	H	E	S	
1	1	1	1	1	1	1

REMARKS

DATE	TYPED/PRINTED NAME AND GRADE OF FLIGHT SURGEON OR FLIGHT MEDICAL OFFICER	SIGNATURE
20 Mar 75	[illegible] LT COL, USAF, MC, SFS	[signature]

25. DIAGNOSIS *(State most serious condition first. Specify resultant conditions from any diagnosis.*

CODES (PRIMARY DG ONLY)	
DG	(37-40) [illegible]
CA	(44-47)

C-1027

AF FORM 1042 NOV 71 PREVIOUS EDITION WILL BE USED.

H(5)

MEDICAL RECOMMENDATION FOR FLYING DUTY

(Do not use for diagnosis for other than medical use of this form)

TO: COMMANDER
21 SOS

FROM: FLIGHT SURGEON'S OFFICE
56 USAF HOSPITAL APO NY 09210

HOSP CODE (1-4): [illegible]

1. LAST NAME-FIRST NAME-MIDDLE INITIAL: [redacted], GEORGE E. III

7. GRADE: [illegible]

7A. GRADE (5-6): E-5

8. AGE (7-8): [redacted]

9. SSAN (9-17): [redacted]

10. ORGN AND MAJOR COMD OF ASGN: 21 SOS(PACAF)

10A. C MD OF ASGN (18):

11. RATING DESG OR FLYING DUTY: FLIGHT ENGINEER

12. COMBAT AIRCREW MEMBER: ☐ YES ☒ NO

11A. RATING (19):

12A. COMBAT (20):

13. FLYING CATEGORY: UNCONDITIONAL

14. ACTUAL DATE FOUND MEDICALLY INCAPACITATED TO FLY: –

13A. CAT (21):

14A. DATE (22-25):

15. MONTH IN WHICH FLT RQMTS WERE LAST MET: –

16. EST DURATION OF INCAPACITY TO FLY: –

17. SERIOUS ILLNESS, IF "YES", ATTACH SF 88: ☐ YES ☒ NO

18. FLYING WITH WAIVER: ☐ YES ☒ NO

19. TOTAL FLYING TIME (26-29): [illegible]

20. GLASSES WILL BE WORN WHILE PERFORMING THOSE DUTIES REQUIRING CORRECTED VISUAL ACUITY: ☐ YES ☒ NO ☐ NA

21. TOTAL DAYS. (No. of days from actual date of incapacitation (Item 14) to date of certification by competent authority as physically qualified to fly) →

21. TOTAL DAYS (30-32):

22. DAYS DURATION IN MEDICAL FACILITY (Use figure from AF Form 565 "Total to Date") →

22. DAYS IN FACILITY (33-35):

8. CERTIFICATE

☐ (FOR INCOMING FLYING PERSONNEL ONLY) I CERTIFY THAT I AM ON FLYING STATUS ACCORDING TO CURRENT ORDERS AND THAT I HAVE HAD NO ILLNESS OR INJURY SINCE LEAVING MY LAST STATION, EXCEPT AS RECORDED BELOW.

☒ I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATIONS BELOW AND UNDERSTAND THE ACTION BEING TAKEN THIS DATE.

I HAVE BEEN OFFICIALLY NOTIFIED THIS DATE THAT:

☐ I HAVE BEEN GROUNDED (OR EXCUSED) BECAUSE OF PHYSICAL DISQUALIFICATION FOR FLYING DUTY.

☒ I AM PHYSICALLY QUALIFIED FOR FLYING DUTY.

SIGNATURE OF FLYER: [signature]

3. CLEARANCE FOR FLYING DUTY IS GIVEN UNDER THE FOLLOWING CIRCUMSTANCES:

☐ REPORTING TO A NEW STATION

☒ ANNUAL MEDICAL EXAMINATION

☐ OTHER REQUIREMENT FOR CLEARANCE (Specify)

4. DATE FLIGHT CLEARANCE EXPIRES: 30 SEP 75

5. INDIVIDUAL PRESENTLY SUSPENDED BY

ACRO ORDER NO.

HEADQUARTERS

PARAGRAPH NO.

DATE

6. COMPETENT CERTIFYING AUTHORITY (When box 4, 5, or 6, of Item 23 is circled, indicate authority to certify as physically qualified)

☐ BASE ☐ NO. AIR FORCE ☐ MAJOR COMD ☐ HQ USAF

23. TYPE OF ACTION RECOMMENDED	YEAR AND MONTH	CIRCLE ONE (36)
EXCUSAL NOT TO EXTEND BEYOND LAST DAY OF		1
GROUNDING NOT TO EXTEND BEYOND LAST DAY OF		2
SUSPENSION AS OF FIRST DAY OF		3
REMOVAL OF EXCUSAL		4
REMOVAL OF GROUNDING		5
REMOVAL OF SUSPENSION		6

REMARKS

24. P U L H E S

DATE: 2 SEP 75

TYPED/PRINTED NAME AND GRADE OF FLIGHT SURGEON OR FLIGHT MEDICAL OFFICER: [illegible] CAPT USAF MC FS

SIGNATURE: [signature]

#(6)

MEDICAL RECOMMENDATION FOR FLYING DUTY

(Diagnosis for other than medical use o

TO: COMMANDER: 22 SOS
AFO SF 96310

FROM: 56 USAF HOSP
APO SF 96310

HOSP CODE (1-4)

1. LAST NAME-FIRST NAME-MIDDLE INITIAL	7. GRADE	7A. GRADE (5-6)	8. AGE (7-8)
WILSON, ROBERT P.	E3		20

2. CERTIFICATE

☒ (FOR INCOMING FLYING PERSONNEL ONLY) I CERTIFY THAT I AM ON FLYING STATUS ACCORDING TO CURRENT ORDERS AND THAT I HAVE HAD NO ILLNESS OR INJURY SINCE LEAVING MY LAST STATION, EXCEPT AS RECORDED BELOW.

☒ I CERTIFY THAT I HAVE BEEN NOTIFIED OF THE RECOMMENDATIONS BELOW AND UNDERSTAND THE ACTION BEING TAKEN THIS DATE.

I HAVE BEEN OFFICIALLY NOTIFIED THIS DATE THAT:

☐ I HAVE BEEN GROUNDED (OR EXCUSED) BECAUSE OF PHYSICAL DISQUALIFICATION FOR FLYING DUTY.

☒ I AM PHYSICALLY QUALIFIED FOR FLYING DUTY.

SIGNATURE OF FLYER	9. SSAN (9-17)
Robert P. Wilson AIC USAF	[redacted]

10. ORGN AND MAJOR COMD OF ASGN	10A. COMD OF ASGN (18)
22 SOS (PACAF)	

11. RATING DESG OR FLYING DUTY	12. COMBAT AIRCREW MEMBER	11A. RATING (19)	12A. COMBAT (20)
Flt Mech	☐ YES ☒ NO		

13. FLYING CATEGORY	14. ACTUAL DATE FOUND MEDICALLY INCAPACITATED TO FLY	13A. CAT (21)	14A. DATE (22-25)
Crew Flying			

15. MONTH IN WHICH FLT RQMTS WERE LAST MET	16. EST DURATION OF INCAPACITY TO FLY
-	-

3. CLEARANCE FOR FLYING DUTY IS GIVEN UNDER THE FOLLOWING CIRCUMSTANCES:

☒ REPORTING TO A NEW STATION

☐ ANNUAL MEDICAL EXAMINATION

☐ OTHER REQUIREMENT FOR CLEARANCE (Specify)

17. SERIOUS ILLNESS, IF "YES", ATTACH SF 88	18. FLYING WITH WAIVER	19. TOTAL FLYING TIME (26-29)
☐ YES ☒ NO	☐ YES ☒ NA	

20. GLASSES WILL BE WORN WHILE PERFORMING THOSE DUTIES REQUIRING CORRECTED VISUAL ACUITY
☐ YES ☐ NO ☒ NA

21. TOTAL DAYS. (No. of days from actual date of incapacitation (Item 14) to date of certification by competent authority as physically qualified to fly) → 21. TOTAL DAYS (30-32)

4. DATE FLIGHT CLEARANCE EXPIRES: 31 Oct 75

22. DAYS DURATION IN MEDICAL FACILITY (Use figure from AF Form 565 "Total to Date") → 22. DAYS IN FACILITY (33-35)

5. INDIVIDUAL PRESENTLY SUSPENDED BY

AERO ORDER NO.	
HEADQUARTERS	
PARAGRAPH NO.	
DATE	

6. COMPETENT CERTIFYING AUTHORITY (When box 4, 5, or 6, of item 23 is circled, indicate authority to certify as physically qualified)

☐ BASE ☐ NO. AIR FORCE ☐ MAJOR COMD ☐ HQ USAF

23. TYPE OF ACTION RECOMMENDED	YEAR AND MONTH	CIRCLE ONE (36)
EXCUSAL NOT TO EXTEND BEYOND LAST DAY OF		1
GROUNDING NOT TO EXTEND BEYOND LAST DAY OF		2
SUSPENSION AS OF FIRST DAY OF		3
REMOVAL OF EXCUSAL		4
REMOVAL OF GROUNDING		5
REMOVAL OF SUSPENSION		6

REMARKS

24. P	U	L	H	E	S	
1	1	1	1	1	1	1

DATE	TYPED/PRINTED NAME AND GRADE OF FLIGHT SURGEON OR FLIGHT MEDICAL OFFICER	SIGNATURE

25. DIAGNOSIS (State most serious condition first. Specify residual conditions from any previous diagnosis.)

CODES (PRIMARY DG ONLY)	
DG	(37-40)
CA	(41-47)

AF FORM 1042 NOV 71 PREVIOUS EDITION WILL BE USED.

C-1027

#67

SIGNIFICANT HISTORICAL DATA

1. MODEL, SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
MAIN ROTOR HEAD 65100-11000-182	SIKORSKY AIRCRAFT STRATFORD, CONN.	A21-130	7-13-71

DATE A	REMARKS B	ORGANIZATION C
7-13-71	Manufactured and accepted as new TSN 0.0 hrs.	NAV PLANT REP SVC, STFD
11 Feb. 72	Installed on acft. 68-10360 acft. hrs. 619.8 TSO: 00.0 TT: 00.0	67th ARRSq APO NY 09405
29-06-72	TCTO 1H-53-544 COMPLIED WITH 26-06-72. AT TIME OF NEXT OVERHAUL OF MAIN ROTOR HEAD REMOVAL, IMPRESSION MARK LETTER "A" ON TOP AND BOTTOM SURFACES OF RETAINING NUT BETWEEN BOLT HOLES NO. 7 AND NO. 11. UTILIZE A LOW STRESS DEPTH CONTROLLED IMPRESSION STAMP WITH A FULL FILLET DEPTH 0.003 INCH MAXIMUM. LETTER HEIGHT 5/32 INCH MINIMUM. REMOVE TEMPORARY WHITE DOT IDENTIFICATION. THESE INSTRUCTIONS HAVE BEEN PLACED IN THIS RECORD IN ACCORDANCE WITH INSTRUCTIONS IN 1H-53-544.	67th ARRS APCNY 09405
22 Jan. 74	Removed from acft. 68-10360 acft. hrs. 1070.1 TT: 450.3 TSCO: 450.3 Reason: Vertical hinge pins on green, yellow and white sleeve and spindles leaking.	67th ARRSq APO NY 09405
29 JULY 74	OVERHAUL #1. ALL BEARINGS REPLACES except 6=55952-11520 & 11519-101 & 3=11521-101. T.O: 3R1-2-9-503,504,505,506 and 1H-53(H) 575, 1H-53-546 & 515 inc. TSO: 0.0' TT: 450.3 hrs. TCTO: 1H-53-556	NAVAIREWORKFAC NORIS
02 FEB 75	UNIT INSTALLED ON ACFT 68-10933 AT 1910.3 ACFT HRS UNIT TT:450.3 TSO: 00.0	56 CAMS APO SF96310

SWASHPLATE ASSEMBLY — SIGNIFICANT HISTORICAL DATA — PAGE OF PAGES

1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
65104-11C00-044	SIKORSKY	A22-382	

DATE (A)	REMARKS (B)	ORGANIZATION (C)
ABSEPT. 71	NO HISTORICAL DATA CARD REC'D WITH COMPONENT. NO INDICATION OF PREVIOUS OVERHAUL. ASSUME ONE HIGH TIME AS TOTAL TIME: TSN: 600.0 TT: 600.0	NAVAIREWORKFAC NORIS
8 NOV. 71	OVERHAUL #1. BEARINGS: ALL NEW. Rotating plate: Ser. EM-47; Stationary plate, Ser. S-103. TSO: 0.0 TT: 600.0	NAVAIREWORKFAC NORIS
[illegible] NOV. 71	Component installed on Acft. HH-53C 68-10354 at 315.7 Acft. Time Component Time 600.0 Hrs. TSO 00.0.	6515 OMS EAFB CALIF.
[illegible] May 72	Complied with T.O. 1H-53-555 Insp. for Rotating Swashplate	Sikorsky Aircraft
5/5/74	Unit Removed from Acft 68-10354 at 743.2 Hrs. Acft Time TT SN 943.5 TSO 143.5 Sudden Stoppage.	NAVAIREWORKFAC NORIS E65E
29 JUL 74	OVERHAUL #2. ALL BEARINGS REPLACED. T.O: 3R1-2-9-502 inc. TSO: 0.0 TT: 743.5	NAVAIREWORKFAC NORIS
02 FEB 75	UNIT INSTALLED ON ACFT 68-10933 AT 1910.3 ACFT HRS UNIT TT: 743.5 TSO: 00.0	56 CAMS APO SF96310

AFTO FORM 95 PREVIOUS EDITION WILL BE USED.

SIGNIFICANT HISTORICAL DATA

1. TYPE, MODEL & SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
6510A-11001-049 Rotating Swashplate Sub-Assembly	Sikorsky	FM -47	

DATE A	REMARKS B	ORGANIZATION C
29 Sept. 71	No Historical data card rec'd with component. No indication of previous overhaul. Assume one high time as total time: TSN: 600.0 TT 600.0	NAVAIREWORKFAC NORIS
9 Nov. 71	Overhaul #I Bearings all new TSN 600 hrs. TSO 0.0	NAVAIREWORKFAC NORIS
29 Nov. 71	Component installed on aircraft HH-53C 68-10354 at 315.7 acft. time Component time 600.0 hrs. TSO 00.0	6515 OMS EAFB CALIF
July 72	Complied with T.O. 1H-53-555 Inspection of Rotating Swashplate	Sikorsky Aircraft
29 JULY 74	OVERHAUL #2. T.O: 3R1-2-9-502 inc. TSO: 0.0 TT: 743.5	NAVAIREWORKFAC NORIS
02 FEB 75	UNIT INSTALLED ON ACFT 68-10933 AT 1910.3 ACFT HRS UNIT TT: 743.5 TSO: 00.0	56 CAMS APO SF96310

SIGNIFICANT HISTORICAL DATA

1. Mission Design Series/Type, Model and Series	2. Manufacturer	3. Serial Number	4. Acceptance Date
ROTARY WING BLADE 65110-00001-047	SIKORSKY AIRCRAFT STRATFORD, CONN.	65X-2967-2671	OCT 2 '70

DATE a	REMARKS b	ORGANIZATION c
NOV 5 70	New component TSN 0.0 hrs., installed on acft. 69-5797 at 0.0 hrs.	HV HLCPT GP SK., SHD
16 July 72	Removed from Acft. 69-5797 acft. hrs. 541.2 TSCO: 541.2 TT: 541.2 Reason: Cracked at 11th pocket.	67th ARRSq APO NY 09405
1-18-73	CHECKED AND REPAIRED — NEW MRB ABRASION STRIP, NEW TIP CAP ASSY. CHECK ELECT. TOUCH UP PAINT STATIC BAL. REPLACE PKTS 1-3-5-7-9-11-13-16	Lambert NAVAIREWORKFAC NORIS
JAN 23 1973	CHECKED	NAVAIREWORKFAC Hanson
15 FEB 73	INSTALLED ON H-53 68-10924 AT 1343.4 ACFT HOURS. TSO: 541.2 TT: 541.2	1550 ATTW HILL AFB,UT
23 MAR 73	REMOVED FROM H-53 68-10924 AT 1411.4 ACFT HOURS.TSO: 609.2 TT: 609.2 REMOVED FOR DAMAGED POCKET.	1550 ATTW HILL AFB,UT
6-13-73	CHECKED AND REPAIRED — BLEND NICKS ON SPAR REPLACE BIM IND. CHECK ELECT. TOUCH UP PAINT STATIC BAL. REPLACED PKTS 4-17	NAVAIREWORKFAC NORIS Lambert
JUL 11 1973	TYN-RAI	NAVAIREWORKFAC Kasarp
15 Aug 73	UNIT INSTALLED ON ACFT 69-5789 AT 1483.0 ACFT HRS T.S.O. 609.2 T.T. 609.2.	OOAMA HILL AFB, UT.
7 DEC 74	REMOVED FROM ACFT 69-5789 AT 1624.1 ACFT HRS TSO 705.3 TT 705.3 REASON FOR REMOVAL CRACK #3 POCKET.	6594th TEST GP 96553
2-23-75	INSP/REPAIR — CHECK ELECT. STATIC BAL. CLEAN & TREAT EROSION ON TIP CAP, Replace Rubber Cap, Repair Nicks in spar, Replace Pkts 8-10, Touch up Paint, BIM IND Checked per AFB-120	NAVAIREWORKFAC NORIS Gimlin
FEB 25 1975	DUPLICATE RECORD FILED NAVAIREWORKFAC NORIS MAY 4 1973	DUPLICATE RECORD FILED NAVAIREWORKFAC NORIS 18 DEC 1972

I (4)

	REMARKS	ORGANIZ
02 APR 75	UNIT INSTALLED ON ACFT 68-10933 AT 1947.9 ACFT HRS UNIT TT:&TSO: 705.3	56 CMBS AFC SF 96310

7 (5)

I (6)

SIGNIFICANT HISTORICAL DATA

1. TYPE, MODEL & SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
CH-53C ROTARY WING BLADE 65150-00001-047	SIKORSKY AIRCRAFT STRATFORD, CONN.	2710-2420	MAR 20 70

DATE A	REMARKS B	ORGANIZATION C
		NAV PLANT REP SIK., STFD
MAR 20 70	New component TSN 0.0 hrs., installed on acft 68-10924 at 0.0 hrs.	1550 ATTW HAFB, UT
25 May 72	Removed from acft 68-10924 at 920.0 acft hrs. TT: 920.0 Removed for blade damage	
10-12-72	CHECKED AND REPAIRED — Clean & Treat Corrosion REPLACE ABRASION STRIP; STATIC BALANCE Replace Tip Cap. Replace Rubber Seal; POCKETS 10' 15' 16' 17'-1-3-5-7-9-11-13-25	NAVAIREWORKFAC NORIS [signature]
OCT 18 1972	DYN-BAL NAVAIREWORKFAC	NORIS [signature]
7-9-73	INSP/REPAIR — Touch up paint static bal. check elect. Replace PKTS 3-7-11-16-25	NAVAIREWORKFAC NORIS [signature]
JUL 1973	DYN-BAL	NAVAIREWORKFAC NORIS [signature]
17 Aug 73	Installed on CH-53C 68-10933 at 1358.1 acft hrs. TSO 0.0, TT 920.0	56 SOS [illegible] 96310
2 FEB 75	BLADE 1000 HR INSPECTION COMPLETED AT 1472.2 BLADE TT I/A/W T.O. 1H-53(H)B-36 AND T.O. 33B1-1-1	56 CAMS APO SF96310
	NAVAIREWORKFAC NORIS MAY 22 1973	DUPLICATE RECORD FILED NAVAIREWORKFAC NORIS 26 JUL 1972

AFTO FORM 95 PREVIOUS EDITION WILL BE USED. AF McGREGOR & WERNER, INC.

SIGNIFICANT HISTORICAL DATA

PAGE 1 OF PAGES

1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
ROTARY WING BLADE - 65150-00001-047	SIKORSKY AIRCRAFT STRATFORD, CONN.	65-M-3556-3000	DEC 17 1970

DATE A	REMARKS B	ORGANIZATION C
DEC 17 70	Manufactured and accepted as new TSN 0.0 hours.	NAV PLANT REP SEC., STFD
21 APR 71	COMPONENT INSTALLED ON ACFT 68-10360 @ 373.3 ACFT HRS TSO: 0.0	40TH ARRSQ APO 96237
24 Mar. 72	Removed from Acft. 68-10360 acft. hrs. 620.7 TSO: 247.4 TT: 247.4 Reason: No Defect.	67th ARRSq APO NY 09405
Mar. 72	Installed on Acft. 68-10368 acft. hrs. 294.2 TSO: 247.4 TT: 247.2	67th ARRSq APO NY 09405
Mar. 74	Removed from Acft. 68-10368 acft.hrs. 905.9 TT: 859.1 TSOO: 859.1 Reason: No Defect.	67th ARRSq APO NY 09405
21 Mar. 74	Installed on Acft. 69-5797 acft. hrs. 963.6 TT: 859.1 TSOO: 859.1	67th ARRSq APO NY 09405
29 Apr. 74	Removed from Acft. 69-5797 acft. hrs. 1050.7 TT:946.2 TSOO9 94632 Reason: Cracked at 16 th pocket.	67th ARRSq APO NY09405
7-23-74	INSP/REPAIR — Clean & Treat Corrosion, BLEND NICKS ON SPAR, CHECK ELECT, TOUCH UP PAINT, STATIC BAL. REPLACE TIP CAP ABRASION STRIP AND FAIRING INST. ANTI-CHAFING STRIP PKT. 26, N/A PKTS 8,16	NAVAIREWORKFAC NORIS [signature]
23 AUG 1974	NAVAIREWORKFAC NORIS — DYN. BALANCE	[signature]
OCT 74	BLADE INSTALLED ON ACFT 68-10933 AT 1770.8 ACFT HRS BLADE TT: & TSO: 946.2	56 CAMS APO SF96310
02 FEB 75	BLADE 1000 HR INSPECTION COMPLETED AT 1085.7 BLADE TT I/A/W T.O. 1H-53(H)B-36 AND T.O. 33B1-1-1	56 CAMS APO SF96310
		7 AUG 1974 DUPLICATE [illegible] NAVAIREWORK[illegible]

AFTO FORM 95 FEB 65 PREVIOUS EDITION WILL BE USED.

I (7)

SIGNIFICANT HISTORICAL DATA

1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
ROTARY WING BLADE 65150-03001-047	SIKORSKY AIRCRAFT STRATFORD, CONN.	6544-3018-2807	SEP 21 1970

DATE A	REMARKS B	ORGANIZATION C
SEP 21 70	Manufactured and accepted as new, TSN 0.00 hours	NAV PLANT REP SIK., STFD
1 Jan.72	COMPONENT INSTALLED ON ACFT.68-10983 CH-53C, AT 495.5 ACFT TIME TT: & TSO: CO.C	56 SPOPS'G APO:96310
02 FEB 73	BLADE 1000 HR INSPECTION COMPLETED AT 1444.8 BLADE TT I/A/W T.O. 1H-53(H)B-36 AND T.O. 33B1-1-1	56 CAMS APO SF96310

(8) 7

SIGNIFICANT HISTORICAL DATA

1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
ROTARY WING BLADE - 65150-00001-047	SIKORSKY AIRCRAFT STRATFORD, CONN.	65-M-3430-3035	JAN 7 - 1971

DATE A	REMARKS B	ORGANIZATION C
JAN 7 71	Manufactured and accepted as new, TSN 0.0 hours.	
07-04-1	MAIN ROTOR BLADE INSTALLED ON CH-53 68-10933 at 152.3 ACFT HRS. TT:0.0 TSO:0.0	56 SPOP WG APO 96310
02 FEB 75	BLADE 1030 HR INSPECTION COMPLETED AT 1758.0 BLADE TT I/A/W T.O. 1H-53(H)B-36 AND T.O. 33B1-1-1	56 CAMS APO SF96310

AFTO FORM FEB 65 95 PREVIOUS EDITION WILL BE USED.

I-(9)

SIGNIFICANT HISTORICAL DATA

PAGE 1 OF 1 PAGES

1. MISSION DESIGN SERIES/TYPE, MODEL AND SERIES	2. MANUFACTURER	3. SERIAL NUMBER	4. ACCEPTANCE DATE
ROTARY WING BLADE 65150-00001-047	Sikorsky Aircraft	65[illegible]-3013-2738	8-19-70

DATE A	REMARKS B	ORGANIZATION C
8-19-70	New component TSN 0.0 hrs., installed on acft 68-10933 at 0.0 hrs.	NAV PLANT REP SIK., STFD
02 FEB 75	BLADE 1000 HR INSPECTION COMPLETED AT 1910.3 BLADE TT I/A/W T.O. 1H-53(H)B-36 AND 33B1-1-1	56 CAMS APO SF96310

PREVIOUS EDITION WILL BE USED.

T-U01

DATE FROM	TO	CREW CHIEF	OMON	LOCATION	MDS	SERIAL NO.
/ /	/ /					

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P / /	/ /	

DISCREPANCY	CORRECTIVE ACTION
	DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P / /	/ /	

DISCREPANCY	CORRECTIVE ACTION
	DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P / /	/ /	

DISCREPANCY	CORRECTIVE ACTION
	DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P / /	/ /	

DISCREPANCY	CORRECTIVE ACTION
	DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

PREVIOUS EDITION IS OBSOLETE

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I(11)

DATE FROM	TO	CREW CHIEF	ORGN	LOCATION	MDS	SERIAL NO.
/ /	/ /					

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I / /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I / /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I / /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I / /	/ /	

DISCREPANCY

#1 & #2 Eng starter [illegible]
port switches

CORRECTIVE ACTION

Ops check good on
#1 & #2 Engine Starters

DATE CORRECTED 21/05/5

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY
		[illegible]	

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

PREVIOUS EDITION IS OBSOLETE

U.S. Government Printing Office: 1973 — 759-798/7009 Region 5-II

I (12)

DATE FROM	TO	CREW CHIEF	ORGN	LOCATION		PAGE OF PAGES SERIAL NO.
/ /	/ /					

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
[illegible]	[illegible]/[illegible]/5				P / /	/ /	

DISCREPANCY	CORRECTIVE ACTION
#1 [illegible] 7.5 [illegible] ∓ 15°C.	Symbol ENTERED ~~[illegible]~~ [illegible]
FUEL FLOW WAS APPROX. 3#BS	ENTERED NEXT page.
(#1 ENG T/C [illegible] [illegible] [illegible])	DATE CORRECTED [illegible]/0[illegible]/5
DN / DISCOVERED BY: N. [illegible] SGT	CORRECTED BY: [illegible] / INSPECTED BY: [illegible]

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
[illegible]	30/0[illegible]/5				P / /	/ /	

DISCREPANCY	CORRECTIVE ACTION
APP WOULD NOT	Removed + Replaced
[illegible] ON ENG SHUT	APP IGNITOR PLUG
DOWN	OPS CK GOOD
	DATE CORRECTED / /
DN / DISCOVERED BY: N. [illegible] SGT	CORRECTED BY: [illegible] / INSPECTED BY: [illegible]

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
[illegible]	/ /	[illegible]	[illegible]		P [illegible] [illegible]/[illegible]/[illegible]	/ /	[illegible]

DISCREPANCY	CORRECTIVE ACTION
[illegible] TOTALLY INOP IN	
[illegible] [illegible] [illegible]	
[illegible] [illegible].	
	DATE CORRECTED / /
DN / DISCOVERED BY: [illegible]	CORRECTED BY / INSPECTED BY

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /	[illegible]	[illegible]		P [illegible] / /	/ /	[illegible]

DISCREPANCY	CORRECTIVE ACTION
[illegible]	
	DATE CORRECTED / /
DN / DISCOVERED BY	CORRECTED BY / INSPECTED BY

AFTO FORM 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT — PREVIOUS EDITION IS OBSOLETE

U.S. Government Printing Office: 1973 — 759-798/7009 Region 5-11

I (13)

DATE FROM / / TO / / | CREW CHIEF | GRADE | LOCATION | MDS | SERIAL NO.

SYM | DATE DISCD / / | WDC | JCN | TAG NO. | CF TO 781A P | DATED / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY | CORRECTED BY | INSPECTED BY

SYM | DATE DISCD / / | WDC | JCN | TAG NO. | CF TO 781A P | DATED / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY

[illegible]

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY | CORRECTED BY | INSPECTED BY

SYM | DATE DISCD / / | WDC | JCN | TAG NO. | CF TO 781A P | DATED / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY | CORRECTED BY | INSPECTED BY

SYM | DATE DISCD / / | WDC | JCN [illegible] 7923 | TAG NO. | CF TO 781A P | DATED / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY

[illegible] T-5 [illegible]

CORRECTIVE ACTION

R&R'd [illegible] on #1

Eng T-5 interconnect

harness. o/c [illegible]

DATE CORRECTED 01/05/5

DN | DISCOVERED BY | CORRECTED BY [illegible] | INSPECTED BY

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

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I (14)

DATE FROM | TO | CREW CHIEF | ORGN | LOCATION | SERIAL NO.

SYM | DATE DISCO / / | WDC | JCN | TAG NO. | CF TO 781A DATED P / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY
[illegible] SWITCH
[illegible] WITH [illegible] NO
[illegible]

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY [illegible] | CORRECTED BY | INSPECTED BY

SYM | DATE DISCO / / | WDC | JCN | TAG NO. | CF TO 781A DATED P / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY
IH [illegible] CARGO BAY
[illegible] ROTA[illegible] SWITCH
NOT [illegible]

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY [illegible] | CORRECTED BY | INSPECTED BY

SYM | DATE DISCO / / | WDC | JCN | TAG NO. | CF TO 781A DATED P / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY
[illegible]

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY [illegible] | CORRECTED BY | INSPECTED BY

SYM | DATE DISCO / / | WDC | JCN [illegible] | TAG NO. | CF TO 781A DATED P / / | TRANSFERRED TO 781K DATE / / | TRANSFERRED BY

DISCREPANCY
[illegible]

CORRECTIVE ACTION

DATE CORRECTED / /

DN | DISCOVERED BY | CORRECTED BY | INSPECTED BY

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

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I (15)

DATE FROM	TO	CREW CHIEF	ORGN	LOCATION	MDS	PAGE OF PAGES / SERIAL NO.
/ /	/ /					

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P / /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
[illegible]	/ /	[illegible]	12[illegible]-[illegible]		P / /	/ /	

DISCREPANCY

[illegible]

CORRECTIVE ACTION

[illegible]

[illegible] 1H-5[illegible]

DATE CORRECTED [illegible]/[illegible]/[illegible]5

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY
		[illegible]	

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P [illegible] / /	/ /	[illegible]

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P [illegible]	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

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I (16)

DATE FROM	TO	CREW CHIEF	ORGN	LOCATION	[illegible]	SERIAL NO.
/ /	/ /					

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A P I	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /					/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A P I	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /					/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A P I	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /					/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCD	WDC	JCN	TAG NO.	CF TO 781A P I	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /					/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

DN	DISCOVERED BY	CORRECTED BY	INSPECTED BY

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

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I (17)

DATE FROM	TO	CREW CH[illegible]	ORGN	LOCATION	MDS	SERIAL NO.
/ /	/ /					

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I	/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I	/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I	/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

SYM	DATE DISCO	WDC	JCN	TAG NO.	CF TO 781A	DATED	TRANSFERRED TO 781K DATE	TRANSFERRED BY
	/ /				P I	/ /	/ /	

DISCREPANCY

CORRECTIVE ACTION

DATE CORRECTED / /

ON	DISCOVERED BY	CORRECTED BY	INSPECTED BY

AFTO FORM MAY 73 781A MAINTENANCE DISCREPANCY AND WORK DOCUMENT

PREVIOUS EDITION IS OBSOLETE

*U.S. Government Printing Office: 1973 — 759-798/7009 Region 5-II

I (18)

WEIGHT AND BALANCE CLEARANCE FORM
TACTICAL
(USE REVERSE FOR TRANSPORT MISSIONS)

FOR USE IN T. O. 1-1B-40 & AN 01-1B-40

DATE	AIRCRAFT TYPE	FROM	HOME STATION
	CH-53C		[illegible]
MISSION/TRIP/FLIGHT/NO.	**SERIAL NO.**	**TO**	**PILOT**
[illegible]	6810933		

REMARKS

P, CP, HIN (2ea)
20 Pax
9500 Lbs fuel
100 EMEQ
2500 CARGO

REF	ITEM					WEIGHT	INDEX OR MOM/
1	BASIC AIRCRAFT (From Chart C)					25631	8[illegible]312
2	OIL (5.5 Gal.)					42	114
3	DISTRIBUTION OF LOAD						
	COMPT.	CREW NO.	CREW WEIGHT	BAGGAGE	CARGO AND MISC.		
	A	2	400	pilots		400	[illegible]
	C	2	400	HMS		400	7[illegible]
	C			EMEQ	100	100	[illegible]
	D			CARGO	1250	1250	365[illegible]
	E			CARGO	1250	1250	4900
	E	10	2000	PAX		2000	7840
	F	10	2000	PAX		2000	9640
4	OPERATING WEIGHT					32482	113270
5	AMMUNITION: COMPT. / ROUNDS / CALIBER						
6	BOMBS, ROCKETS, ETC.: FORWARD						
	AFT						
	EXTERNAL						
	ROCKETS						
7	FUEL: BUILT IN (597 Gal.)					3880	13230
	BOMB BAY (Gal.)						
	EXTERNAL (865 Gal.)					5620	19534
8	WATER INJ. FLUID (Gal.)						
9	JATO OR RATO						
10	TAKEOFF CONDITION (Uncorrected)					41982	145035
11	CORRECTIONS (If required)						
12	TAKEOFF CONDITION (Corrected)						
13	TAKEOFF C. G. IN ~~% M. A. C.~~ OR IN.					345.5	
14	LESS EXPENDABLES: JATO OR RATO						
	BOMBS						
	AMMUNITION						
	FUEL 1276 GAL					8300	27734
15	ESTIMATED LANDING CONDITION					33682	117301
16	ESTIMATED LANDING C. G. IN ~~% M. A. C.~~ OR IN.					348.2	

COMPUTER PLATE NO. (If used)
Chart 'E' [illegible]

Pertinent instructions to the pilot for shifting load and crew during takeoff and landing should be noted above.

CORRECTIONS (Ref. 11)

COMPT.	ITEM	CHANGES (+ or −) WEIGHT	[1] INDEX OR MOM/
TOTAL WEIGHT REMOVED		−	−
TOTAL WEIGHT ADDED		+	+
NET DIFFERENCE (Ref. 11)			

LIMITATIONS

[2] GROSS WT. TAKEOFF (lb.)	[2] GROSS WT. LANDING (lb.)
[illegible]	42000

	FROM	TO (% M. A. C. or IN.)
[3] PERMISSIBLE C. G. TAKEOFF	328.0	[illegible]
[4] PERMISSIBLE C. G. LANDING		35[illegible]

COMPUTED BY (Signature) [illegible]

WEIGHT AND BALANCE AUTHORITY (Signature) [illegible]

PILOT (Signature)

[1] Enter constant used.
[2] Enter values from current applicable T. O.
[3] Applicable to gross weight (Ref. 12).
[4] Applicable to gross weight (Ref. 15).

II (19)

WEIGHT AND BALANCE CLEARANCE FORM F
TACTICAL
(USE REVERSE FOR TRANSPORT MISSIONS)

FOR USE IN T. O. 1-1B-40 & AN 01-1B-40

DATE	AIRCRAFT TYPE	FROM	HOME STATION
	[illegible]		[illegible]
MISSION/TRIP/FLIGHT/NO. SUPPORT	SERIAL NO. 6510 933	TO [illegible]	PILOT

REMARKS
P, CP, NM (2 EN)
11 PAX
12,500# FUEL
100 # EM EQ
1395 # CARGO

COMPUTER PLATE NO. (If used) [illegible]

REF	ITEM					WEIGHT	INDEX OR MOM/
1	BASIC AIRCRAFT (From Chart C)					[illegible]	[illegible]
2	OIL ([illegible] Gal.)					[illegible]	[illegible]
3	DISTRIBUTION OF LOAD						
	COMPT.	CREW NO.	CREW WEIGHT	BAGGAGE	CARGO AND MISC.		
	A	2	400	[illegible]		400	[illegible]
	C	2	400	[illegible]		400	[illegible]
	D			EM EQ	100	100	[illegible]
	D			CARGO	698	698	[illegible]
	D	5	1000	PAX		1000	[illegible]
	F	6	1200	PAX		1200	[illegible]
	F			CARGO	697	697	[illegible]
4	OPERATING WEIGHT					[illegible]	[illegible]

Pertinent instructions to the pilot for shifting load and crew during takeoff and landing should be noted above.

REF		ITEM			WEIGHT	INDEX OR MOM/
5	AMMUNITION	COMPT.	ROUNDS	CALIBER		
6	BOMBS, ROCKETS, ETC.	FORWARD				
		AFT				
		EXTERNAL				
		ROCKETS				
7	FUEL	BUILT IN ([illegible] Gal.)			[illegible]	[illegible]
		BOMB BAY (Gal.)				
		EXTERNAL (1300 Gal.)			8450	[illegible]
8		WATER INJ. FLUID (Gal.)				
9		JATO OR RATO				
10		TAKEOFF CONDITION (Uncorrected)			[illegible]	[illegible]
11		CORRECTIONS (If required)				
12		TAKEOFF CONDITION (Corrected)				
13		TAKEOFF C. G. IN % M. A. C. OR IN.			[illegible]	
14	LESS EXPENDABLES	JATO OR RATO				
		BOMBS				
		AMMUNITION				
		FUEL 1712 gal			11128	[illegible]
15		ESTIMATED LANDING CONDITION			30777	[illegible]
16		ESTIMATED LANDING C. G. IN % M. A. C. OR IN.			[illegible]	

CORRECTIONS (Ref. 11)

COMPT.	ITEM	CHANGES (+ or −) WEIGHT	INDEX OR MOM/
TOTAL WEIGHT REMOVED		−	−
TOTAL WEIGHT ADDED		+	+
NET DIFFERENCE (Ref. 11)			

LIMITATIONS

GROSS WT. TAKEOFF (lb.)	GROSS WT. LANDING (lb.)
[illegible]	42,000

	FROM	TO (% M. A. C. or IN.)
PERMISSIBLE C. G. TAKEOFF	[illegible]	[illegible]
PERMISSIBLE C. G. LANDING	[illegible]	[illegible]

[illegible] BY (Signature)

WEIGHT AND BALANCE AUTHORITY (Signature) [illegible]

¹ Enter constant used.
² Enter values from current applicable

I (29)

T. O. 1 1B-40 & AN 01-1B-40

WEIGHT AND BALANCE CLEARANCE FORM F
TACTICAL
(USE NOT FOR TRANSPORT MISSIONS)

DATE	AIRCRAFT TYPE	FROM	HOME STATION
13 MAY 1975	CH 53 C	APO 96310	APO 96310
MISSION/TRIP/FLIGHT/NO.	**SERIAL NO.**	**TO**	**PILOT**
0-13	68-10933	APO 96330	1Lt Kaus

REMARKS
Compt C/Extra Ammo & Flares
Compt D/Hyd Cart
Compt E/blade Handles Tow bar-work bench
Compt E/F/PAX wt. 250 each

REF	ITEM					WEIGHT	INDEX OR MOM/
1	BASIC AIRCRAFT (From Chart C)					26039	524
2	OIL (5.8 Gal.)					43	524
3	DISTRIBUTION OF LOAD						
	COMPT.	CREW NO.	CREW WEIGHT	BAGGAGE	CARGO AND MISC.		
	A	2	400	P/CP		400	473
	B	1	200	#1 HM		200	416
	C	1	200	#2 HM		200	416
	C			PAX/LM	200	200	429
	C			Xtra Ammo	550	550	320
	D			CARGO	209	209	384
	E			CARGO	922	922	410
	E			PAX 11	2750	2750	431
	F			PAX 7	1750	1750	604
4	OPERATING WEIGHT					32263	604
5	AMMUNITION: COMPT.	ROUNDS	CALIBER				
	C/LH	3000	7.62			195	579
	C/RH	3000	7.62			195	584
6	BOMBS, ROCKETS, ETC.: FORWARD						
	AFT						
	EXTERNAL						
	ROCKETS						
7	FUEL: BUILT IN (597 Gal.)					3880	584
	BOMB BAY (Gal.)						
	EXTERNAL (778 Gal.)					4620	638
8	WATER INJ. FLUID (Gal.)						
9	JATO OR RATO						
10	TAKEOFF CONDITION (Uncorrected)					41153	632
11	CORRECTIONS (If required)					-500	
12	TAKEOFF CONDITION (Corrected)					40653	632
13	TAKEOFF C. G. IN % MAC OR IN.					346.4	
14	LESS EXPENDABLES: JATO OR RATO						
	BOMBS						
	AMMUNITION						
	FUEL						
15	ESTIMATED LANDING CONDITION						
16	ESTIMATED LANDING C. G. IN % MAC OR IN.						

COMPUTER PLATE NO. (If used)

Pertinent instructions to the pilot for shifting load and crew during takeoff and landing should be noted above.

CORRECTIONS (Ref. 11)

COMPT.	ITEM	CHANGES (+ or −) WEIGHT	[1] INDEX OR MOM/
	Built in Fuel Burned on During Run up & Taxi	-500	
TOTAL WEIGHT REMOVED		−	−
TOTAL WEIGHT ADDED		+	+
NET DIFFERENCE (Ref. 11)			

LIMITATIONS

[2] GROSS WT. TAKEOFF (lb.)	[2] GROSS WT. LANDING (lb.)	
42000	42000	
[3] PERMISSIBLE C. G. TAKEOFF	FROM 308.0	TO (% MAC or IN.)
[4] PERMISSIBLE C. G. LANDING	FROM	TO (% MAC or IN.) 35?.0

COMPUTED BY (Signature)

WEIGHT AND BALANCE AUTHORITY (Signature)

PILOT (Signature)

[1] Enter constant used.
[2] Enter values from current applicable T. O.
[3] Applicable to gross weight (Ref. 12).
[4] Applicable to gross weight (Ref. 15).

DD FORM 365F

I (21)

1. DATE | 2. CREW CHIEF | 3. ORGANIZATION | 4. LOCATION | 5. SERIAL NUMBER

7. STATUS OF OVERDUE IN PROGRESS AND ACCOMPLISHED INSPECTIONS INCLUDING FCFs

TYPE	SYM	SYSTEM	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME
				/ /	:
				/ /	:
				/ /	:
				/ /	:
				/ /	:
				/ /	:

8. CERTIFICATION OR ACCOMPLISHMENT OF BASIC POSTFLIGHT OR THRUFLIGHT

FLT NO	TYPE INSP.	ACCOMPLISHED BY	COMPLETED DATE	COMPLETED TIME
1.		OPS STOP	/ /	:
2.		OPS STOP	/ /	:
3.		OPS STOP	/ /	:
4.		[illegible]	310412	21.10
5.			/ /	:
6.			/ /	:

9. STATUS DATA (SEE BLOCK 7 AND AFTO FORMS 781A AND 781K FOR EXPLANATION OF THE STATUS SYMBOL)

STATUS TODAY		BOX NO.	EXCEPTIONAL RELEASE (Enter Box No.)
1	7	1	RO [illegible]
2	8		
3	9		
4	10		
5	11		
6	12		

10. FLIGHT CONDITION DATA

FLT NO.	COND AFT FLT	PILOT'S SIGNATURE ENTER AFTER EACH FLIGHT	Over Temp Entered	Aux Engine or APU Operation
1	OK	[illegible] 217	0	
2	OK	[illegible] 217	0	
3	OK	[illegible] 217	0	
4	/	[illegible] 217	0	
5				
6				

11. MUNITIONS/GUNS STATUS

STATUS 781A ENTRY	H	C	N	H	C	N	H	C	N	H	C	N	H	C	N	H	C	N	TOTAL TODAY
	P		1	P		1	P		1	P		1	P		1	P		1	

12. SERVICING DATA

SER NO.	FUEL (Gallons or Pounds) OCTANE OR GRADE	QUANTITY SERVICED	TOTAL IN TANKS	OIL (Pints, Quarts, or Gallons) 1 SER	1 IN	2 SER	2 IN	3 SER	3 IN	4 SER	4 IN	5 SER	5 IN	6 SER	6 IN	7 SER	7 IN	8 SER	8 IN	OXY PRESS O2 QTY	A.D.I. WATER
1.	[illegible]		[illegible]																		
2.	5	[illegible]	[illegible]																		
3.																					
4.																					
5.																					
6.																					

13. SERVICING CERTIFICATION (Signature, Grade and Station at Which Servicing Is Accomplished)

1	BY	[illegible]	3	BY	5	BY
	AT			AT		AT
2	BY	[illegible]	4	BY	6	BY
	AT	CVN 71		AT		AT

14. AIRFRAME TIME

PREVIOUS	[illegible]
1	3.0
2	
3	
4	
5	
6	
TOTAL	[illegible]

15. LANDINGS

FULL STOP	TOTAL
10	10

16. CARTRIDGE STARTS

NO.	ENG.	NO.	ENG.

17. ENGINE CYCLE DOCUMENTATION

NO. 1 ENG.	NO. 2 ENG.	NO. 3 ENG.	NO. 4 ENG.	NO. 5 ENG.	NO. 6 ENG.	NO. 7 ENG.	NO. 8 ENG.

AFTO FORM 781H MAY 73 PREVIOUS EDITION IS OBSOLETE.

AEROSPACE VEHICLE FLIGHT STATUS AND MAINTENANCE DOCUMENT

☆ U.S. Government Printing Office: 1973-756-524 Reg 85-11

7 (22)

WARNER ROBINS, AMC INVESTIGATION RESULTS ON WRECKAGE OF CH-53C HELICOPTER

SN 68-10955

LOCATION OF ACCIDENT: NAKHON PHANOM RTAFB, THAILAND.

DATE OF ACCIDENT: 13 MAY 1971.

Investigation and inspection efforts were concentrated on the main rotor head and main rotor blades due to the scatter pattern of the wreckage. That is, the main gearbox/main rotor head (MGB/MRH) assembly was found a considerable distance (approximately 2500 feet) from the crash site which indicates in flight separation of the main gearbox from the fuselage. Findings and conclusions are as follows:

1. MAIN ROTOR HEAD ASSEMBLY: All major components of the main rotor head assembly were recovered with the exception of one sleeve from the six sleeve and spindle assemblies. Five spindles remained attached to the rotor head up until ground impact at which time they were torn loose from the upper and lower plates. Five sleeves with blades attached separated from their spindles in flight. The other sleeve and spindle separated from the rotor head as an assembly, in flight, with blade attached. This blade has a heavy impact mark approximately 12 feet from the blade tip made by contacting some hard object, most likely another sleeve/blade departing the rotor head.

It is concluded that this blade contact is the reason the sleeve and spindle separated the rotor head together rather than the sleeve alone as did the other five sleeves.

The modes of failure of the five sleeve and spindle assemblies which allowed the sleeves/blades to depart the rotor head were as follows:

a. Retainer nut on end of spindle sheared threads. (two assemblies)

b. Retainer nut in inboard end of sleeve sheared threads. (two assemblies)

c. Crack in threads in inboard end of sleeve which initiated total fracture around sleeve.

Even though one sleeve is missing, its mode of failure was determined by examining the mating spindle assembly. The crack in the threaded area of the sleeve started internally and propagated to the external surface of the sleeve. The length of the crack prior to failure was approximately 2½ inches inside the sleeve and approximately 1½ inches on the outside. The age of the crack is yet undetermined, but there is no doubt it was in existence prior to the fatal flight of the aircraft. The cracked surfaces of the sleeve are undergoing a metallurgical examination to determine the reason for the cracking. This cracked sleeve is the suspected cause of the accident.

T(1)

2. MAIN ROTOR BLADES: Five complete main rotor blades and a three-foot section of the tip end of the sixth blade were recovered. One of the five recovered blades was still in one piece. The other four were broken into two and three segments. There were only two impact marks, (one on each of two blades) on the five blades other than ground impact marks. These were heavy marks made by contact with a massive object such as another blade/sleeve flying from the rotor head during the disintegration sequence. There was no substantiating evidence of the blades striking the fuselage prior to their departure from the rotor head.

The blade that was attached to the suspected (cracked) sleeve possessed no impact marks or green paint from striking the fuselage or flying debris. The tip was crushed at ground impact at which time the blade broke into two pieces. This blade/sleeve is belived to have been the first to depart the rotor head.

Examination of all the fracture surfaces on the blade segments showed the fractures to have been caused from overload with no evidence of prior cracking. Consequently, blade cracking/failure is not a suspected cause of the accident.

3. TAIL ROTOR ASSEMBLY: The tail rotor assembly with the tail gearbox attached separated from the tail pylon in flight. The four pitch change rods were broken off leaving the rod-ends intact. All four blades were broken off with remaining section lengths ranging from one to two feet still attached to the blade cuffs. Blade fracture surfaces show the separations were from overload with no signs of prior cracking. All eight (four inboard and four outboard) coning stops were sheared off the tail rotor hub. There was evidence that all four blades had flapped a considerable distance past the inboard and outboard stops. However, there were no rotational marks on the vertical section of the tail pylon to indicate blade contact with the pylon. Consequently, the extreme flapping most likely occurred after the tail rotor assembly departed from the pylon.

Malfuction of the tail rotor assembly is not a suspected cause of the accident.

4. FUSELAGE: The helicopter fuselage forward of station number 600 was completely consumed in the post crash fire. The tail pylon assembly AFT of station number 750 had separated from the aircraft in flight and was found a short distance away (approximatary 1500 ft). The unburned section of the fuselage (Sta. 600 to 750) showed no signs of an inflight fire. Also no evidence of an inflight pyrotechnic explosion and/or projectile ground fire was found during examination of the fuselage remains.

5. ENGINES: Both engines remained on the fuselage and were burned but not consumed. Examination of the compressor and power turbine section of each engine revealed evidence of high RPM rotation on the number one engine and no rotation on the number two engine. The speed selector settings on the remains of the two fuel control units showed the number one engine setting approximately 80 degrees from the full power stop and the number two engine setting approximately 30 degrees from the full power stop. The number two engine obviously experienced stall and flame-out.

J(7)

when the power turbine ceased rotation from the tearout of the main gearbox and the engine driveshafts.

6. AUXILIARY POWER PLANT: The APP remained on the fuselage and was burned but not consumed. Examination of the turbine wheel showed no signs of rotation. Therefore, the APP was not in operation at the time of the crash.

7. DRIVE TRAIN GEARBOXES:

A. Main Gearbox: The main gearbox was fastened to the airframe by 12 steel bolts located in pairs equidistant around the transmission. Four of the paired bolt locations are positioned to fasten the gearbox to two major cross-beam structual members of the airframe. The other two paired bolts are fastened to longitudinal stringers of a lower load bearing capacity. When the gearbox departed the airframe, it carried with it a small section of each of these longitudinal stringers. However, the cross-beam airframe members were significantly stronger than the gearbox mounts so the mounts fractured and a portion of the mounts and their bolts were retained with the airframe. The single exception to this failure pattern was one bolt and its half of the mount which were retained on the gearbox. The bolt threads on this bolt appeared to have been stripped and then subjected to an extended period of wear within a confined area (bolt hole or bushing). However, close inspection revealed that the bolt threads were stripped in one single overload situation. Consequently, there is no reason to believe that the bolt was separated from its barrel nut prior to the disintegration of the aircraft.

The remains of the main gearbox with the main rotor head attached was analyzed for any evidence of internal failure. The oil pump was recovered and examination did not reveal any evidence of scoring, scratches or damage indicative of gearbox failure. The oil filter was examined for evidence of metal debris or contaminants. No indication of main gear internal failure was found.

Upon impact with the ground the entire main gearbox housing was shattered. Portions of the slider guide were recovered and examined. No evidence of a soft nickel plated slider guide was found. Aircraft records reflected that the Navy team inspected the slider guide on this aircraft and recorded a Rockwell hardness of Rc-40. All evidence indicates that the main gearbox was properly installed and functioning normally until crash sequence began.

B. Accessory and Nose Gearboxes: The accessory and two nose gearboxes remained with the aircraft and were consumed in the fire. Only a few of the gears were recovered.

C. Intermediate Gearbox: The intermediate gearbox remained intact

J (3)

on the tail pylon and suffered very little damage.

D. Tail Gearbox: The tail gearbox with the tail rotor head attached is believed to have been separated from the tail pylon by the same inflight pitching forces that separated the pylon from the AFT fuselage. The tail gearbox was found relatively close to the tail pylon (Approximately 70 ft.). Separation of the tail gearbox occurred at the gearbox mounts. The gearbox suffered only minor damage.

No evidence could be found of in-flight material failure of the drive train gearboxes that would have caused the accident.

8. FLIGHT CONTROL SYSTEM:

A. Primary Servos: The three primary servos were recovered. Extensive damage was induced when the main gearbox with servos attached impacted the ground. Both sides (first stage and second stage) of two of the servos possessed split cylinder walls. The other servo possessed a split cylinder wall on the second stage side only, however, this servo contained evidence that its bottom mounting bolts sheared during impact. The split cylinder walls are indicative that hydraulic fluid was present in the cylinders and impact forces generated hydraulic pressure sufficient to rupture the walls. Malfunction of the primary servos is not a suspected cause to this accident.

B. AFCS Servos: The four AFCS servos (roll-pitch-collective-yaw) exhibited extensive impact and fire damage. The flight control rod connections were still intact at input and output sides of each servo. The servos possessed the redundant load path link which was installed by TCTO 1H-53-549. Malfunction of the AFCS servos is not a suspected cause to this accident.

C. Flight Control Rods: The majority of the flight control rods were consumed in the fire. No flight control rod-end bearings were found with the bolts missing from the inner races. A flight control rod disconnect is not a suspected cause of this accident.

9. HYDRAULIC SYSTEMS: Various hydraulic system parts were recovered. These parts exhibited extensive impact and post impact fire damage. Examination of the remains of these parts revealed the following findings:

A. The second stage return filter was clean. No evidence of contaminants was found.

B. The second stage pump remains possessed a drive shaft with splines that were in good condition. One failure mode of the hydraulic pumps is worn or stripped splines. No evidence was found indicating that the second stage pump failed prior to the beginning of the crash sequence.

C. The first stage pump rotated freely. A small amount of trapped hydraulic fluid from the pressure side of the pump was examined for evidence of metal debris. No evidence was found to indicate that the pump had failed in any manner.

Four of the six main blade dampers were recovered. Malfunctio of the dampers was not suspected and nothing significant to the cause of the accident was found from examination of the recovered dampers.

All of the stationary swashplate and the major portion of the rotating swashplate remained intact and assembled to the rotor head. The outer periphery of the rotating swashplate including all the pitch change rod attachment points were broken off during ground impact and were found with the MGB/MRH assembly.

Approximately one-third of the swashplate spherical ball was recovered. The ball had the old generation chrome plating and no excessive scoring was found on the working surfaces of the recovered section of the ball. The hardness of the swashplate guide (slider) had been previously measured by the North Island Navy Team to be Rc-40 (minimum hardness is Rc-[illegible]). Materiel failure of the swashplate assembly including the ball and slider is not a suspected cause of the accident.

The upper plate of the main rotor head assembly sustained relatively minor damage. One arm was slightly twisted. No other distortion was noted. Some chipping occurred on the lower edges of the vertical bores when the spindles were torn loose from the rotor head at ground impact. The lower plate of the main rotor head was severely damaged with only portions of two of the six arms remaining attached to the rotor hub assembly. The breakup of the lower plate occurred at ground impact when the five spindle assemblies were torn away from the upper and lower plates. The pieces of the lower plate were found with the MGB/MRH. Materiel failure of the upper and lower plates of the rotor head is not a suspected cause of the accident.

The recovery of the missing sleeve/blade assembly is not necessary for the completion of the investigation. Examination of the spindle from which the missing sleeve separated revealed the failure mode to be stripped threads both inside the sleeve and on the retainer nut that secures the sleeve to the spindle. This was the mode of blade separation of one other blade and is an expected result of the extreme out-of-balance condition induced after loss of one blade while the rotor is rotating.

Only one of the six horizontal hinge pins was sheared off during the crash sequence. The other five were in relatively good condition and showed no evidence of sudden stoppage. The one sheared hinge pin was broken off adjacent to the damper bearing journal. The break was in the outboard direction and was caused by the blade striking some heavy object such as another sleeve/blade departing the rotor head. The sheared-off hinge pin is a component part of the previously discussed sleeve and spindle assembly that departed the rotor head as an assembly. This hinge pin facture is not considered a contributing factor in the cause of the accident.

The six droop stops and anti-flapping assemblies were well mutilated during disintegration of the rotor head. The droop stop mounts on the vertical hinge assemblies showed no evidence of extreme blade droopage as occurs when rotor blades strike the fuselage.

T (5)

D. The first stage return filter was found with a popped dirty filter indicator. Examination of filter element did not reveal any contamination. Impact forces are considered to be the cause for the popped indicator.

E. No parts of the utility system were recovered which revealed any findings.

No evidence was found indicating that a failed hydraulic system caused or contributed to this accident.

10. SUMMARY: The discovered crack in one of the sleeves of the six sleeve and spindle assemblies is considered to be the cause of the accident. However, a definite determination cannot be made until the metallurgical analysis of the fracture surfaces is completed. Rationale for this preliminary determination are as follows:

A. Location of main gearbox/main rotor head relative to crash site (approximately 2500 feet separation distance).

B. Main rotor blade separation had to have occurred to induce the asymmetrical loading condition of sufficient magnitude to abruptly rip off the main gearbox.

C. Blade separation had to have initiated inboard from blade cuff since all blade fractures outboard from cuff were from overload with no evidence of prior cracking.

D. Crack in the suspected sleeve existed prior to fatal flight and was cause for separation of suspected sleeve/blade from rotor head.

E. Modes of blade separation for other five blades have been observed in past on previous H-53 accidents. These modes have always been the results following causes such as blade separation or blade-fuselage strikes.

F. Blade attached to suspected sleeve possessed no impact marks other than ground impact which is indicative this blade was first to leave rotor head.

No other evidence was found of in-flight materiel failure in the wreckage that could be classified as being the cause of the accident.

Marvin Griffin

MARVIN GRIFFIN
System Manager Representative
Warner Robins ALC/MMATH

Gerald Rowell

GERALD ROWELL
Systems Engineer
Warner Robins ALC/MMEAM

J (6)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 56TH SPECIAL OPERATIONS WING (PACAF)
APO SAN FRANCISCO 96310

REPLY TO ATTN OF: WRALC/MMETM (N. Waninger) 20 May 1975

SUBJECT: Bolt and Barrel Nut, Main Gearbox Support Mount.

TO: General Clark
President of Accident Investigation Board
CH-53C, 68-10933

A bolt removed from main gearbox support mount appeared to be worn in threaded area. The barrel nut that was mated to the bolt was removed and sectioned for evaluation. Barrel nut internal threads showed heavy metal slivers located between internal threads of barrel nut. This is positive evidence that bolt and barrel nut stripped themselves apart by overload. There is no reason to believe bolt was separated from barrel nut prior to crash.

Norman J. Waninger

NORMAN J. WANINGER
WRALC/MMETM Materials Engineer

J (7)

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 56TH SPECIAL OPERATIONS WING (PACAF)
APO SAN FRANCISCO 96310

REPLY TO ATTN OF: Norman Waninger, Materials Engineer WRALC/MMETM

SUBJECT: Status Report on CH-53C, SN 68-10933, Crash Investigation

TO: General Clark

1. Observation of a sleeve from a sleeve and spindle assembly from above subject aircraft reveals the following:

a. There is a prior crack completely through wall of sleeve. This crack was about 2½ inches on inside portion of sleeve and about 1½ inches on outside diameter of sleeve. Crack originated from inside diameter of sleeve in the root of internal threads on sleeve which corresponds with leading edge of blade. Fatigue striations are evident at outer edges of crack. Microscopically there appears to be a failure only by fatigue. Electron microscope and other tests should be performed at WRALC to definitely define cause of failure at origin of crack.

b. A crack of this type could be catastrophic by causing entire blade to depart from aircraft.

Norman J. Waninger

NORMAN J. WANINGER
Materials Engineer

J(8)

56 CSG/JA

3 June 1975

SUBJECT: Claims Aspects of CH-53C Helicopter, 68-10933, Accident of 13 May 1975

TO: Collateral Investigation Officer

1. On 14 and 15 May 1975 I was present at the crash site.

2. Pursuant to AFR 67-5 I have made cash payments in the total amount of 5,363 Baht ($263.54) on 5 vouchers as "Reward" payments for the recovery of aircraft and parts.

3. Pursuant to MACTHAI Regulation 27-1 I made a solatium payment in the amount of 450 Baht ($22.02) to the landowner of the crash site.

4. The "Reward" payments were principally made for recovery of rotor blades.

5. Thus the total amount expended by my office in conjunction with this accident was 5,813 Baht ($285.56). I do not expect any further claims to arise from local Thai nationals.

James S. Hocker

JAMES S. HOCKER, Lt Colonel, USAF
Staff Judge Advocate

K (11)

REWARD-PAYMENT

I, MR. PROMMA POKAMPA, have received payment of reward this date 19 May 1975 in the amount of 450 Baht for solatium payment resulting from a USAF helicopter crashed on ~~18~~ 13 May 75.

The reward payment was presented to me by Lt Col James S. Hocker, USAF, 56CSG/TA.

Signed:____________________

Address: 11 GROUP 13, BAN DON KHA

การจ่ายเงินรางวัล

ข้าพเจ้า นายพรมมา โพธิคำภา ได้รับเงินรางวัลในวันนี้ ~~18~~ 19 พฤษภาคม 2518 จำนวนเงินที่ได้รับ 450 บาท เป็นการตอบแทนในการที่ข้าพเจ้า ได้รับเป็นค่าทำขวัญจากการที่เครื่องบินเฮลิคอปเตอร์ตกในบริเวณที่ดินของข้าพเจ้าเมื่อวันที่ ~~18~~ 13 พ.ค. 18 เงินรางวัลดังกล่าวนี้ได้จ่ายให้แก่ข้าพเจ้าโดย น.ท.เจมส์ เอส.ฮ็อคเกอร์ หน.ทหารพระธรรมนูญ ทอ.อม. นครพนม

ลงชื่อ นายพรมมา ผู้รับเงิน

ที่อยู่ 111 หมู่ 12 บ้านดอนแคน ต.ขมิ้น อ.เมือง จ.สกลนคร

CERTIFICATE OF WITNESSING OFFICER

I, Tommie B. Daniels, SGT, USAF 56CSG/SV FR 255-50-6534, certify that I (name, rank, SSAN, and organization) have witnessed payment of reward this date 19 MAY 1975, in the amount of ฿450.00 Baht to MR. PROMMA POKAMPA, (name and address of payee) A THAI NATIONAL, the solatium was presented to the payee by LTCOL JAMES S. HOCKER, 205-30-3590 - 56 CSG/JA. (name, rank, SSAN, and organization)

Tommie B. Daniels

K(2)

(Translation)

Residence of Village Chief Group 12, Tambol Kamin,
Muang District, Sakolnakorn Province.

18 May 1975

To: Chief of Tambol (Commune) Sawang, Pannanikom District, Sakolnakorn Prov.

Subject to a USAF helicopter accidentally crashed at Mr. Promma Pokampa's land, a villager of Ban Donkan, Group 12, Tambol Kamin, Muang District, Sakolnakorn Province, and caused damages to the said area, and because this plot of land already registered Title Deed;

I do hereby certify that Mr. Promma Pokampa is a villager who resides in the area under my administration.

/s/ Mr. Promma Pokampa	Land Owner
/s/ Mr. Karl Kruttamtam	Village Chief, Group 12
/s/ Mr. Soong Kaewdee	Village Chief, Group 2

At Ban Donkoy, Tambol Sawang, Pannanikom District,
Sakolnakorn Province.

18 May 1975

Re: A USAF helicopter crashed at Mr. Promma's land

To: Chief of Tambol (Kamnan) Sawang, Pannanikom District, Sakolnakorn Prov.

A USAF helicopter was accidentally crashed at my land locates at the said above address (Group 2 Ban Donkoy, Tambol Sawang, Tambol Kamin) and caused damage to the said land and I am going to ask for compensation from the USAF authority.

I submit this letter for your approval.

/s/ Mr. Promma Pokampa	Land Owner
/s/ Mr. Soong Kaewdee	Village Chief, Ban Donkoy

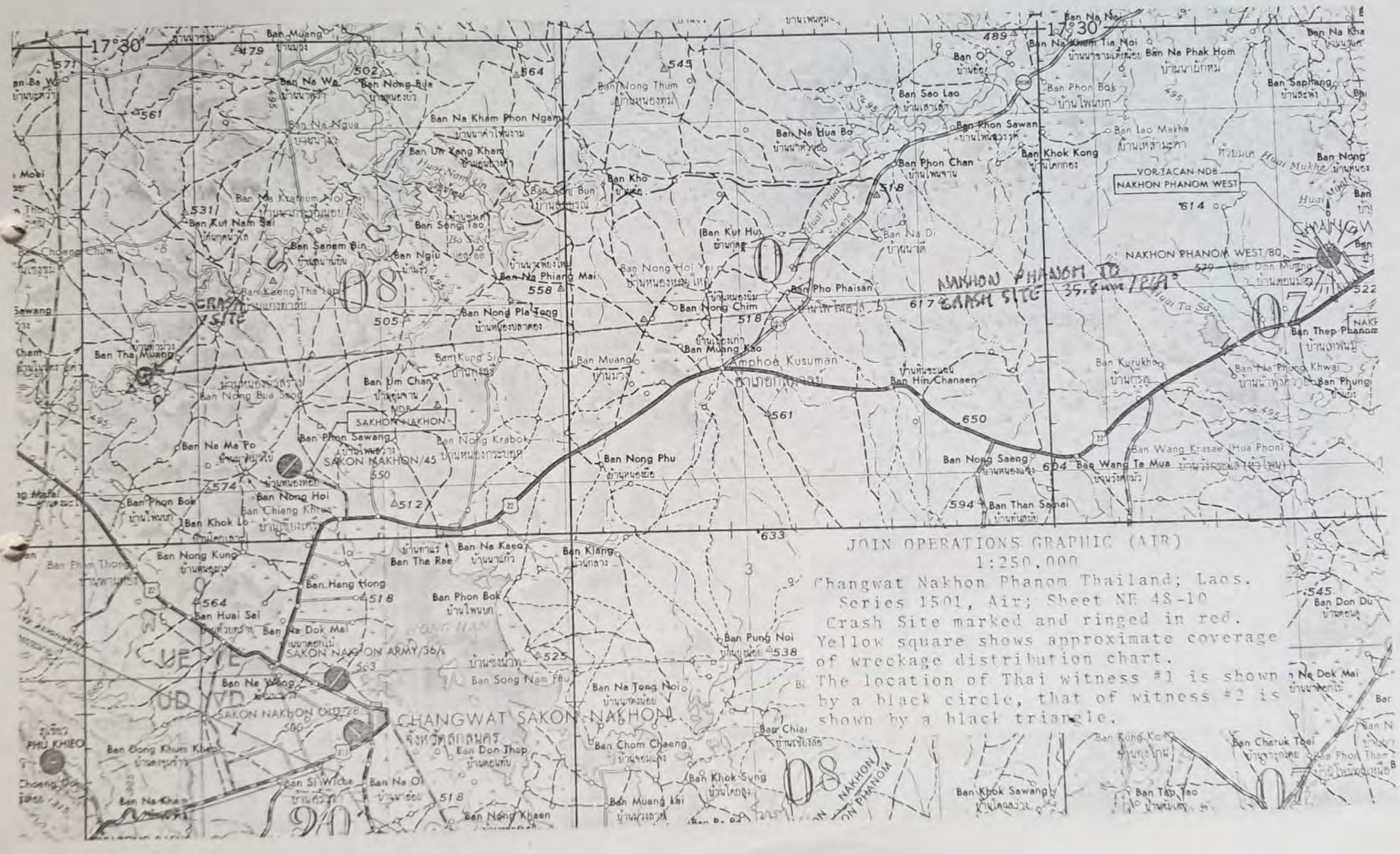
Approved: /s/ Signature illegible — Chief of Tambol (Commune)

Translated by:

MR. KLAR MEKSAWAN
Office of the Staff Judge Advocate
APO San Francisco 96310

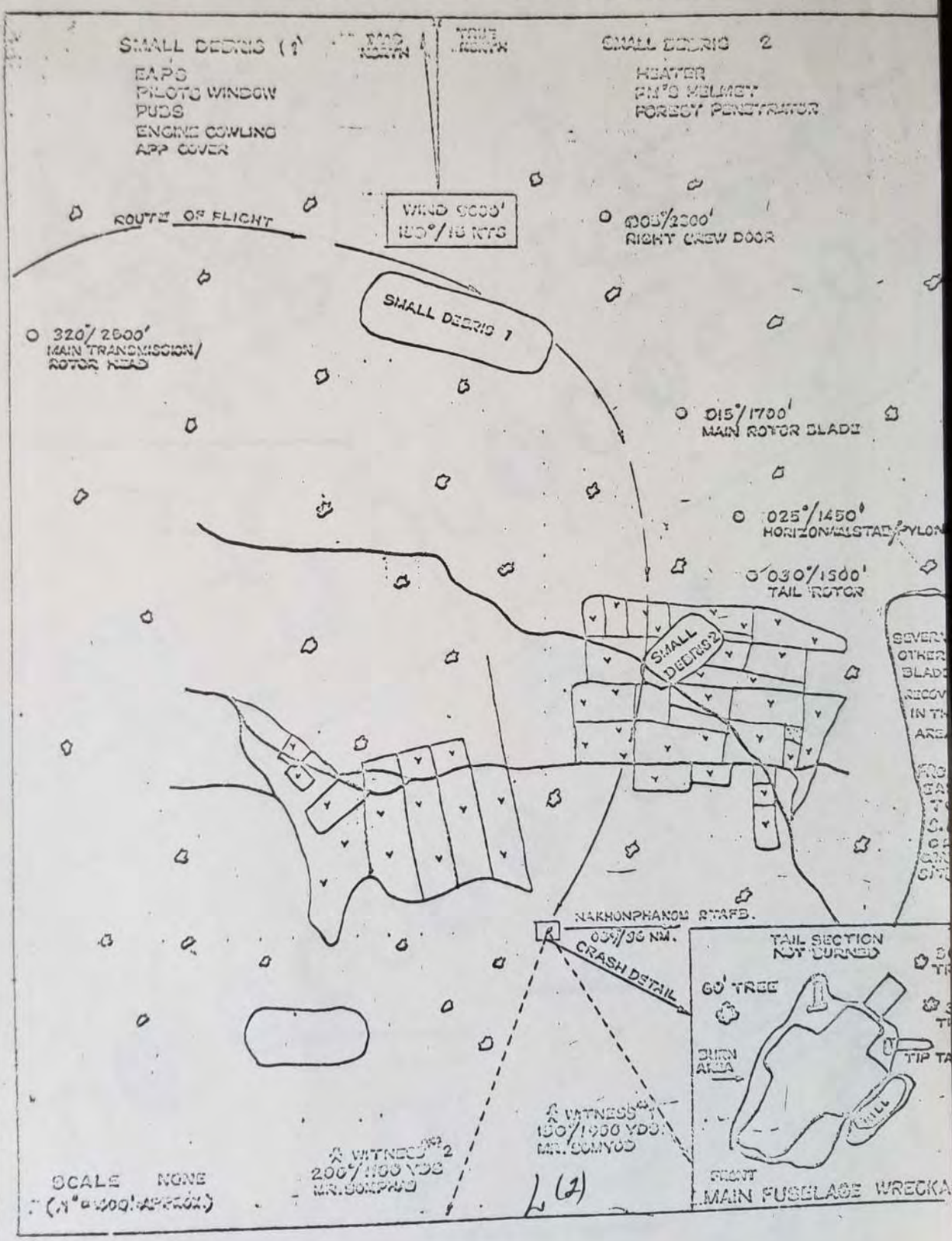
K(3)

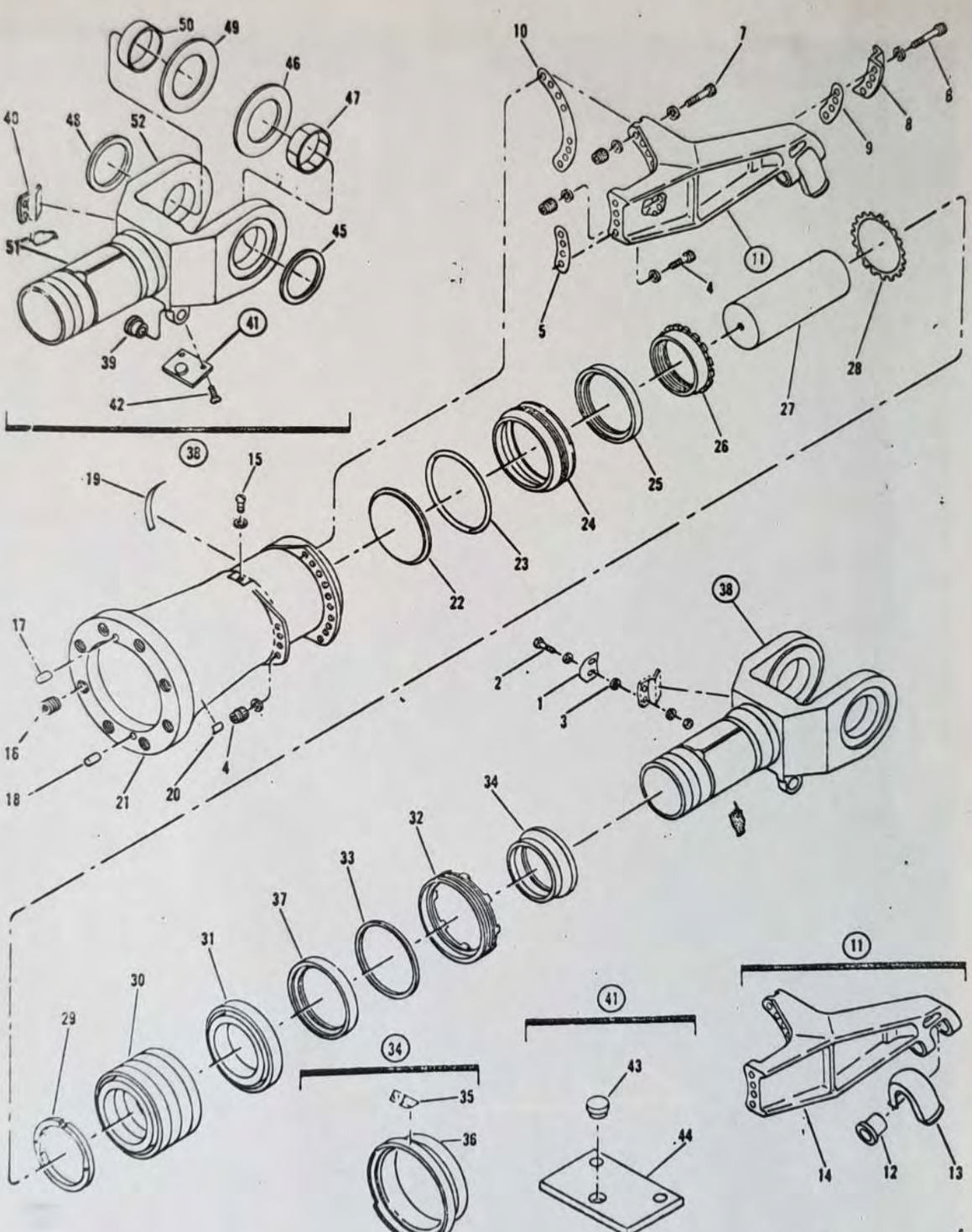
K (4)



JOIN OPERATIONS GRAPHIC (AIR)
1:250,000
Changwat Nakhon Phanom Thailand; Laos.
Series 1501, Air; Sheet NE 48-10
Crash Site marked and ringed in red.
Yellow square shows approximate coverage of wreckage distribution chart.
The location of Thai witness #1 is shown by a black circle, that of witness #2 is shown by a black triangle.

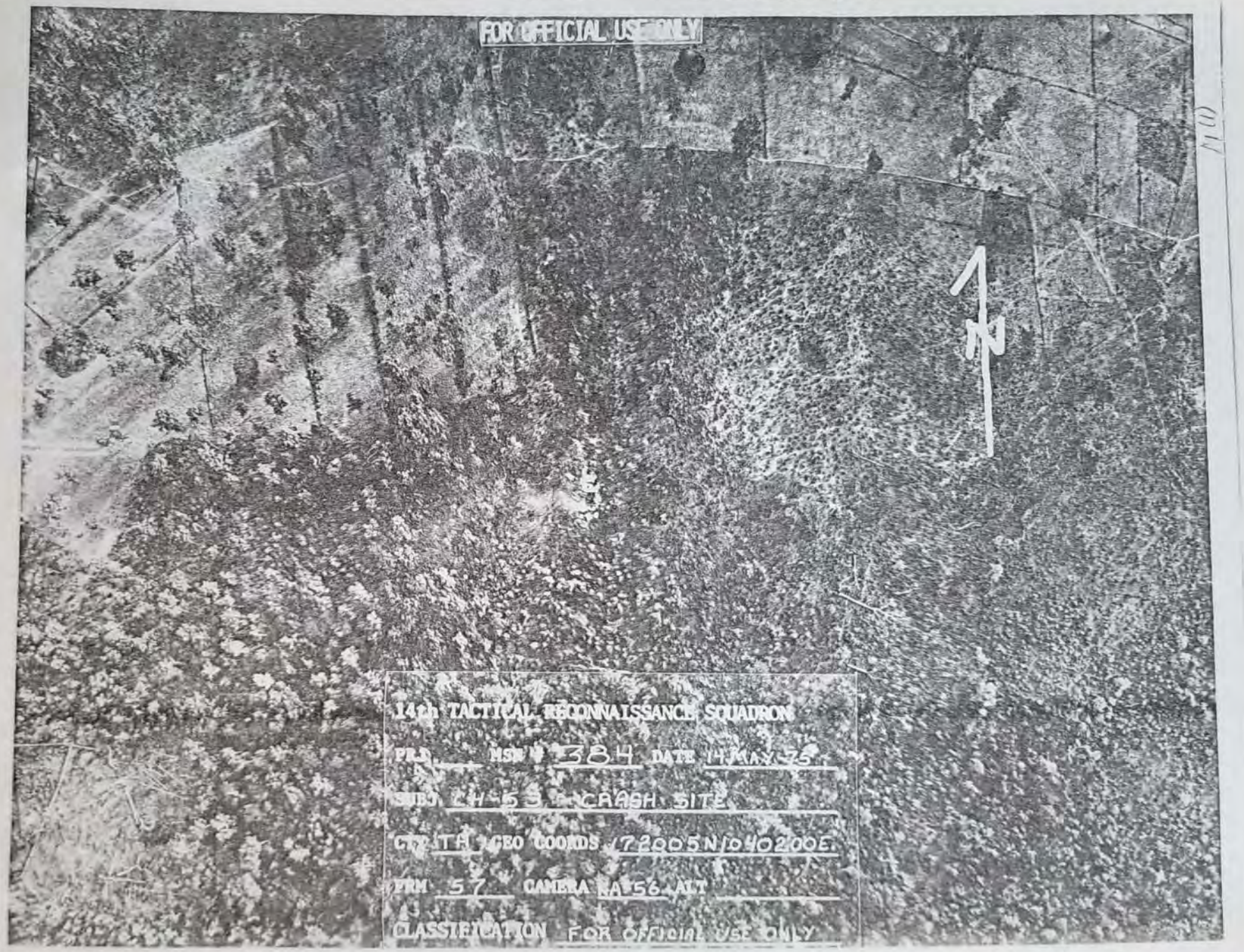
MAP SHOWING CRASH SITE LOCATION


SMALL DEBRIS (1)
EAPS
PILOTS WINDOW
PUDS
ENGINE COWLING
APP COVER
MAG NORTH
TRUE NORTH
SMALL DEBRIS 2
HEATER
PM'S HELMET
FOREIGN PENETRATOR
ROUTE OF FLIGHT
WIND 5000'
100°/10 KTS
005°/2300'
RIGHT CREW DOOR
SMALL DEBRIS 1
320°/2600'
MAIN TRANSMISSION/
ROTOR HEAD
015°/1700'
MAIN ROTOR BLADE
025°/1450'
HORIZONTAL STAB/PYLON
030°/1500'
TAIL ROTOR
SMALL DEBRIS 2
NAKHONPHANOM RTAFB.
030°/30 NM.
CRASH DETAIL
TAIL SECTION
NOT BURNED
60' TREE
BURN AREA
TIP TA
HILL
WITNESS #1
150°/1950 YDS.
MR. SOMYOD
WITNESS #2
200°/1100 YDS
MR. SOMPAO
SCALE NONE
(1" = 400' APPROX.)
MAIN FUSELAGE WRECKA

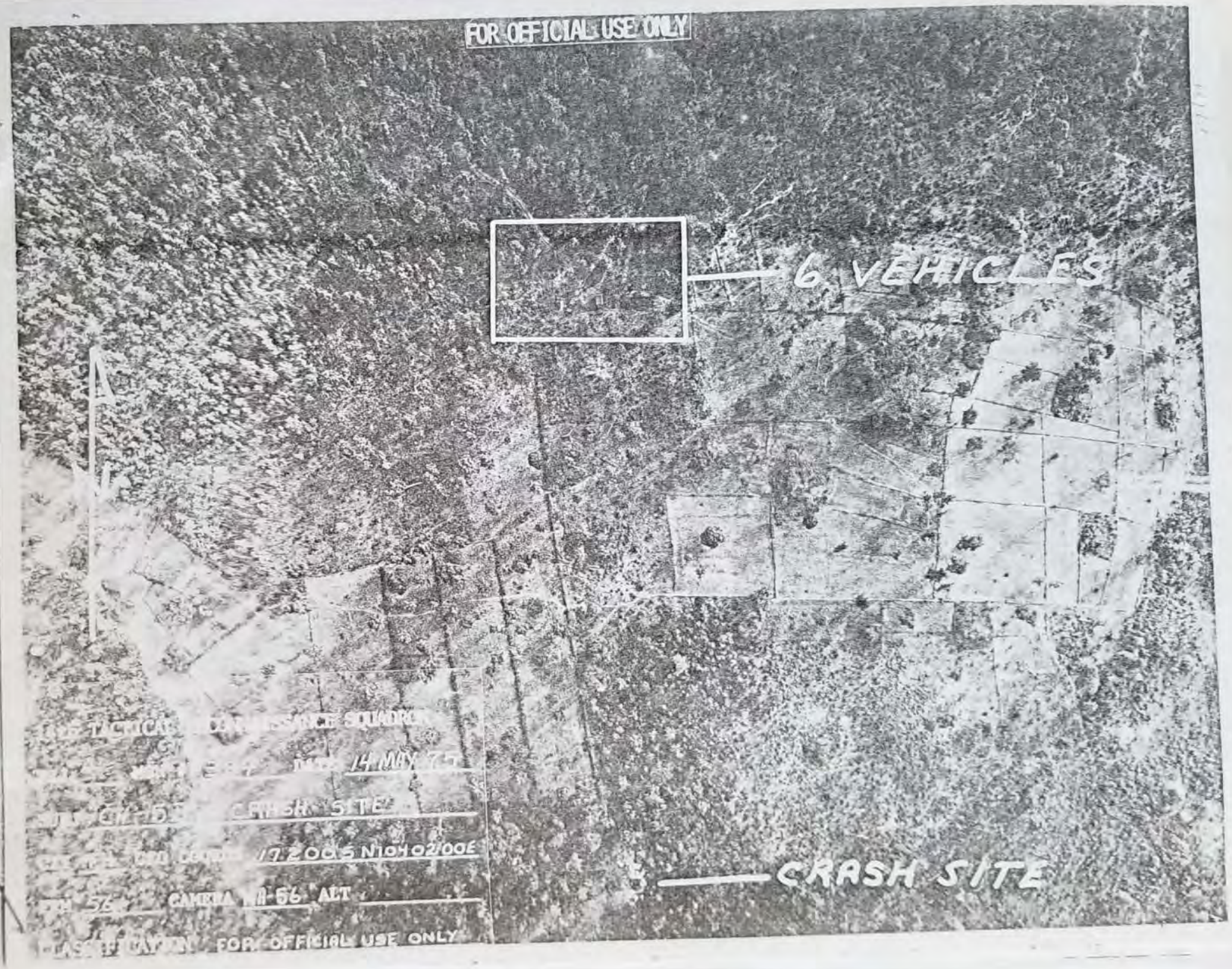


Sleeve and spindle assembly

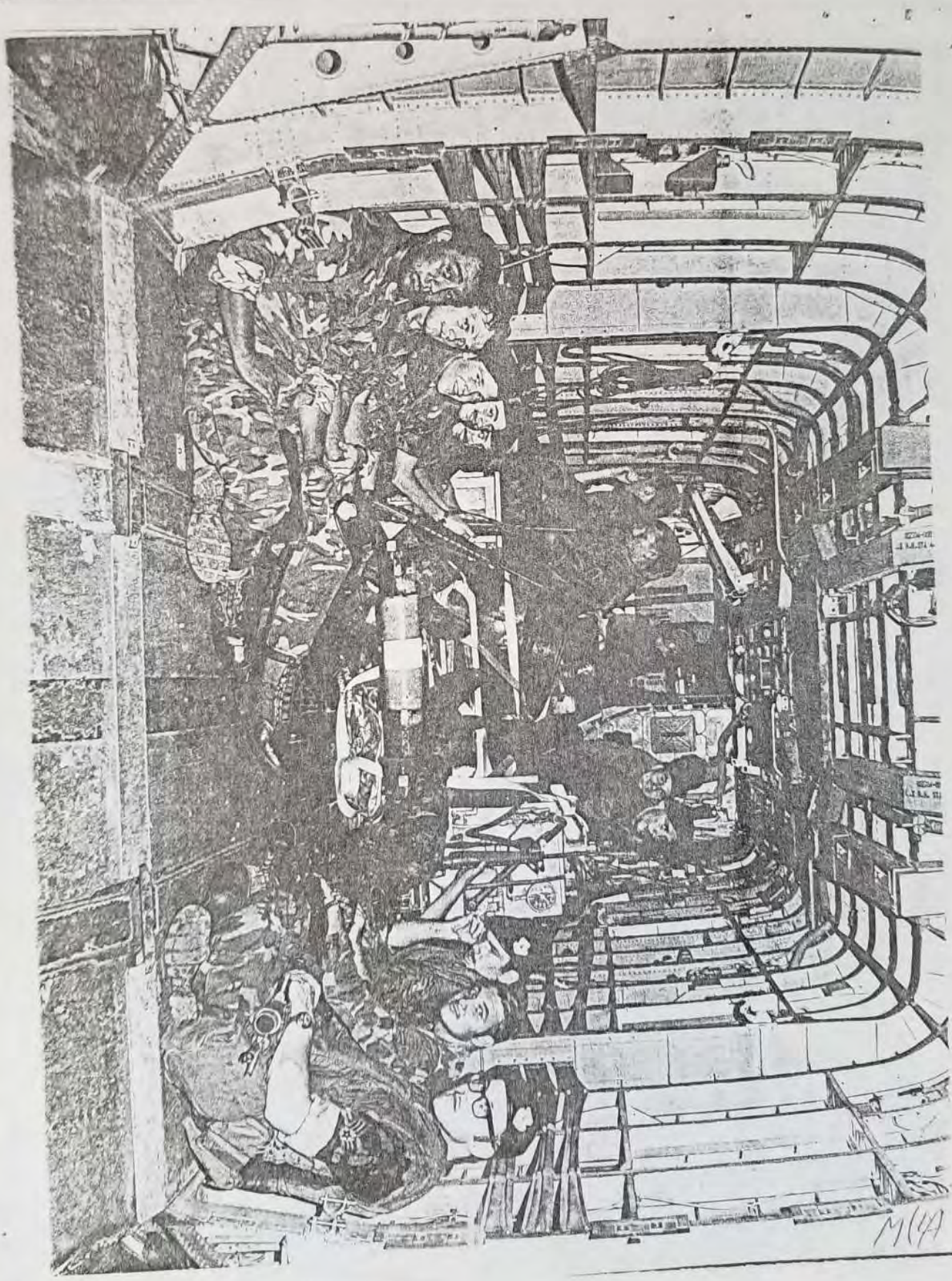
L (3)

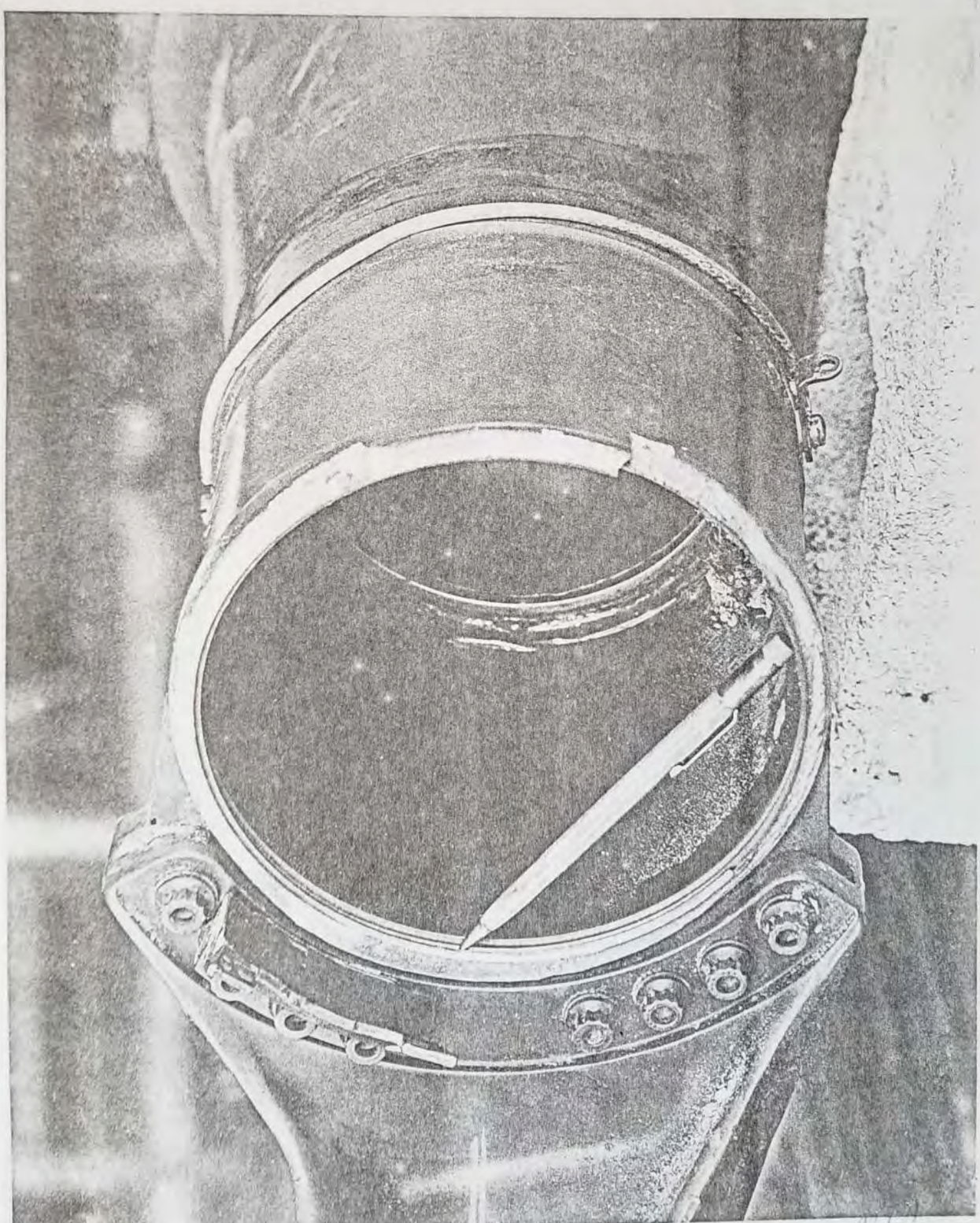

FOR OFFICIAL USE ONLY
14th TACTICAL RECONNAISSANCE SQUADRON
PILOT MSN # 384 DATE 14 MAY 75
SUBJ LH 53 CRASH SITE
CTR TH GEO COORDS 17200 5N 1040200E
FRM 57 CAMERA KA 56 ALT
CLASSIFICATION FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY



FOR OFFICIAL USE ONLY





DEPARTMENT OF THE AIR FORCE
40TH AEROSPACE RESCUE & RECOVERY SQUADRON (MAC)
APO SAN FRANCISCO 96310

REPLY TO ATTN OF: Major John F. Guilmartin, Jr., [redacted] 40ARRS/DO 11 Sep 75

SUBJECT: Addendum to Collateral Investigation of Crash of CH-53C 68-10933

TO: 13AF/JA

1. Reference the attached Warner Robins Air Logistics Center/MMATH Teardown Deficiency Report dated 12 Aug 75. This constitutes the final addendum to the Collateral Investgation Board Report.

2. Reference Paragraph 3 of attached Teardown Deficiency Report: The Collateral Investigating Officer finds that the loss of CH-53C 68-10933 was caused by failure to install a liner in the referenced blade sleeve during overhaul at the NAVAIREWORKFAC, North Island, San Diego. Installation of the protective liner was required by T.O. 3R1-2-9-3NI 31150-71.

JOHN F. GUILMARTIN, JR., Major, USAF
Investigating Officer

Atch 2
Addendum

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS WARNER ROBINS AIR LOGISTICS CENTER (AFLC)
ROBINS AIR FORCE BASE, GEORGIA 31098

REPLY TO ATTN OF: MMATH (Mr Griffin, 2878) 12 AUG 1975

SUBJECT: Teardown Deficiency Report on Sleeve and Spindle Assembly P/N 65102-11051-187, NSN 1615-00-139-3302, WUC 15128, 56SOW CAT I Report 75-31, WR/ALC MIP WRNAA 75-0152 from CH-53C Helicopter S/N 68-10933

TO: 656 CSGP/SE 40 ARRS/DO CINCPACAF/SE

AFISC/SE AFLC/MMXQ

1. A copy of subject report is forwarded herewith.

2. Analysis of the report reveals the following.

a. Sleeve P/N 65102-11051-187 failed in high cycle fatigue originating in a thread root (2nd thread from bottom) in the leading edge (adjacent to pitch horn attach flange). The sleeve did not contain a protective liner as required by T.O. 3R1-2-9-3/NI 31150-71.

b. Metallographic analysis indicated that the sleeve contained no metallurgical abnormalities and was in the solution treated plus annealed condition as required by blueprint.

3. The liner was inadvertantly left out by NAVAIREWORKFAC, North Island, San Diego, California during overhaul of main rotor head during July 1974. The omission of the liner caused .045 inch clearance between the stacked bearings on the spindle and the ID of the sleeve. This clearance induced the cyclic fatigue crack which resulted in total failure.

4. As a result of the above findings, NAVAIREWORKFAC changed the overhaul procedures to insure the installation of a liner. Specific changes included revision of two quality control verification requirements from artisan certification to quality assurance mandatory verification prior to final assembly. TCTO 1H-53-619 was issued on 25 May 75 requiring the inspection of all installed and spare sleeve and spindle assemblies for proper wall thickness and presence of a liner if required. NAVAIREWORKFAC dispatched qualified teams with equipment to conduct this inspection. This inspection was completed on all Air Force helicopters on 3 Jun 75.

5. The above actions are considered adequate to preclude this type failure and this is closing action on WR/ALC MIP WRNAA 75-0152.

J. Rudolph Cannon

J. RUDOLPH CANNON
Cargo, Helicopter & Utility Acft SM Div
DIRECTORATE OF MATERIEL MANAGEMENT

1 Atch
TDR w/atch

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AFR 12-30

AFLC — Lifeline of the Aerospace Team

Addendum 2 (1)

NAVAL AIR REWORK FACILITY
NAVAL AIR STATION
NORTH ISLAND
SAN DIEGO, CALIFORNIA 92135

MATERIALS ENGINEERING DIVISION
AERONAUTICAL ENGINEERING DEPARTMENT
PHONE (714) 437-8711
AUTOVON 951-8711

REPORT SYMBOL
NAVAIRREWORKFAC 4730-3
34100/JMD & AB

MATERIAL ANALYSIS

REQUESTED BY (AND AIR CONTROL NO.)	REQUESTING CORRESPONDENCE
Code 32211 (M. L. Brown)/MIP75-0152	DMM Robins AFB 211230Z May 1975
EXAMINATION OF (PART/MATERIAL NOMENCLATURE, PART NO., SER. ETC.)	MATERIAL RECEIPT DATE
Sleeve, sleeve & spindle assy., Rotary Wing Head P/N 65102-11051-187	23 May 1975
REMOVED FROM (AIRCRAFT/ENGINE MODEL, S/N, ETC.)	REFERENCE DOCUMENT (NO., PAGE, PAR., FIG., ETC.)
CH-53C, S/N FM-161, Ser.No. 68-10933(U.S.Air Force)	NA0395B-115 NI/31149-71; T.O. 3R1-2-9-3/NI 31150-71

1. Background.

a. The aircraft was involved in a crash in the Asiatic area.

b. Sleeve spindle assembly time since new - 1008.7 hours

c. Sleeve spindle assembly time since overhaul - 90 hours

d. Prior history (similar failure) - only one - Feb ruary 1972. Contractor inadvertently introduced assembly into system without liner; the assembly was replaced without any accident.

e. The failed sleeve, P/N 65102-11051-187 was submitted to the Materials Engineering Laboratory for failure analysis.

f. Part missing was: liner, P/N 64102-11082-102.

2. Tests. The following tests and examinations were conducted:

a. visual;

b. macroscopic;

c. microscopic;

d. spectrographic chemical analysis;

e. "wet" chemical analysis;

f. electron microscopic fractography, (TEM);

g. S.E.M. x-ray energy dispersion

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AFR 12-30

(continued on page 2)

REPORT BY	APPROVED BY	REPORT NO.
R. Bennett, Metallurgist J. [illegible], Physics Science Tech.	A. J. Pietrykowski, Head Metallurgical Branch	37509 DATE APPROVED 17 July 1975

LABORATORY REPORT
11MD-NAVAIREWORKFAC-4730/1 (REV. 8-74)

ENCLOSURE (1)
Addendum

NAVAIREWORKFAC NORIS Laboratory Report No. 37509

3. Results.

a. Visual and macroscopic examination of the spindle revealed that fracture had occurred in the threaded region of the upper end (smaller diameter) of the part. Enclosure (1) depicts the overall assembly, with the failed region at the top.

b. Enclosure (2) reveals a closer view of the failure area with the failed buttress thread portion exposed to view.

c. Enclosure (3) is a view of the internal wall of the sleeve, photographed at an angle, from the fracture surface down. Circumferential scoring is visible approximately 2/3 down to the internal support ring; mutilation and deformation are also visible along the support ring.

d. Enclosure (4) presents another view of both the damaged internal support ring as well as a top view of the entire fracture surface. (The origin area of the failure is on the bolt flange side.)

e. The two separate fracture segments containing the buttress threads are disclosed in enclosure (5) indicating the general topography of the fracture faces.

f. Enclosure (6) is a close-up view of one portion of the failed thread indicating the location of the fracture with respect to thread position, as well as a portion of the fracture face.

g. Enclosures (7) and (8) are enlarged views of the separated fractured thread ring shown re-assembled in enclosure (5). In enclosure (7) note the flat progression of the fracture, parallel to the thread direction. In enclosure (8) we find the mating half of the thread ring indicating a different type of fracture face and propagation mode.

h. Enclosures (9) and (10) are top views of the fracture face (of enclosure ~~(7)~~), at slightly higher magnification. The appearance of the surface is indicative of fatigue type failure, with the origin occurring in the I.D. region at the top, and propagating both clockwise and counterclockwise along the thread profile.

i. Enclosure (11) is a higher magnification view of the fracture face. The fatigue originated at the bottom edge (in the second thread root)(in the central portion of the photograph) and expanded both upward and laterally in both directions.

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j. Enclosure (12) is an electron microscope fractograph at 12,000 X magnification presenting two typical views of the fatigue mode of failure in the thread root area. Fatigue striations (clam-shell markings) are prominently displayed in both pictures.

k. Wet chemical analysis, spectrographic and scanning electron microscope (SEM) x-ray energy dispersion analyses verified the sleeve alloy as Ti 6Al-4V.

l. Metallographic evaluation indicated a normal microstructure at 500X for forged, solution treated and annealed Ti 6Al-4V alloy. (Light) equiaxed alpha grains in transformed beta matrix (dark) containing coarse, acicular alpha (see enclosure (13)).

m. Fractographic analysis: Indicated high cycle type fatigue crack propagation as the primary failure mode for the sleeve. The general fatigue striation configuration is shown by enclosure (12).

In order to estimate the number of fatigue striations certain assumptions had to be made; (a)that propagation was directional and (b) that the striation propagation was continuous. Note on this fracture the fatigue striations were in localized areas both discontinuous and multi-directional. Based on the assumptions made, it was estimated that there were approximately 70,000 striations from the thread root to the O.D. at the mid point of the fatigue type fracture. From the center line of the brittle portion of the fracture circumferentially to the rapid ductile phase of failure there were an estimated 550,000 striations. The fracture also exhibited cleavage characteristics and ductile dimples were noted on the surface out of the brittle zone.

4. Conclusions.

a. The sleeve failed in high cycle fatigue originating in a thread root (2nd thread from bottom) in the leading edge (adjacent to pitch horn attach flange). The submitted failed sleeve did not contain a protective inner liner as required per NA 03-95B-115/NI 31149-71 and T.O. 3R1-2-9-3/NI 31150-71 H-53 helicopter, 65102-11051 series sleeve repair procedure; instructions concerning.

b. Metallographic analysis indicated that the structure contained no metallo cal abnormalities and was in the solution treated plus annealed condition as required by blueprint.

c. Fractographic analysis and striation counts with the electron microscope indicated that the fatigue striations from the thread root on the I.D. to the sleeve O.D. were approximately 70,000. The propagation of individual striation

(13)
Addendum B

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circumferentially to the ductile phase of failure was estimated at 550,000 in number.

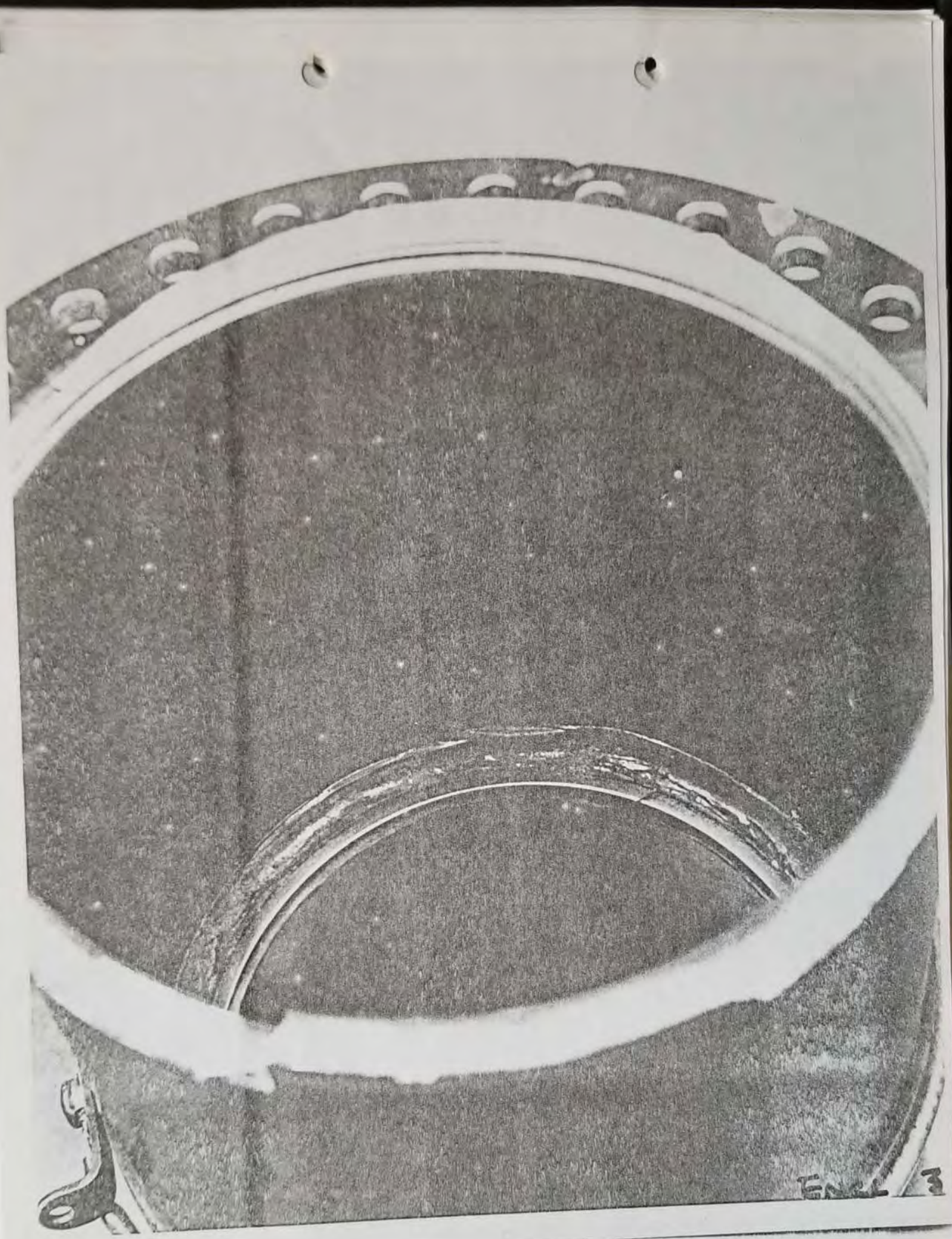
d. Chemical, spectrographic, and SEM analyses all confirmed the alloy analysis as titanium alloy 6 Al-4V.

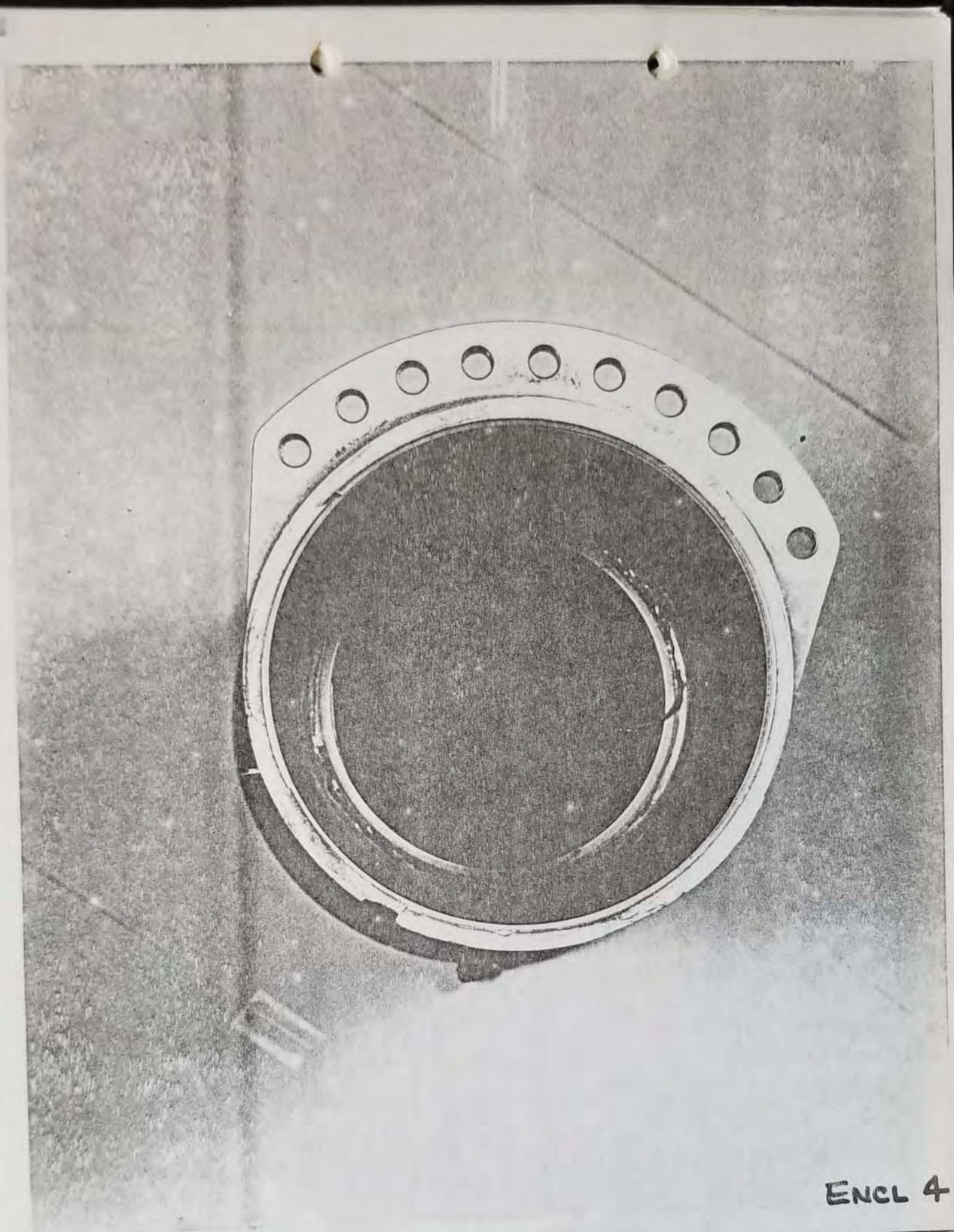
ENCLOSURES:
(1) NAVAIREWORKFAC NORIS Photo No. LAA-59384
(2) NAVAIREWORKFAC NORIS Photo No. LAA-59386
(3) NAVAIREWORKFAC NORIS Photo No. LAA-59385
(4) NAVAIREWORKFAC NORIS Photo No. LAA-59382
(5) NAVAIREWORKFAC NORIS Photo No. LAA-59379
(6) NAVAIREWORKFAC NORIS Photo No. LAA-59383
(7) NAVAIREWORKFAC NORIS Photo No. LAA-59369
(8) NAVAIRFWORKFAC NORIS Photo No. LAA-59378
(9) NAVAIREWORKFAC NORIS Photo No. LAA-59367
(10) NAVAIREWORKFAC NORIS Photo No. LAA-59370
(11) NAVAIREWORKFAC NORIS Photo No. LAA-59368
(12) NAVAIREWORKFAC NORIS Photo No. LAA-L-3885 (12,00 X fractograph)
(13) NAVAIREWORKFAC NORIS Photo No. LAA-L-3886 (500 X metallograph)

2(2)
addendum

ENCL.1

Encl. 2


ENCL 3



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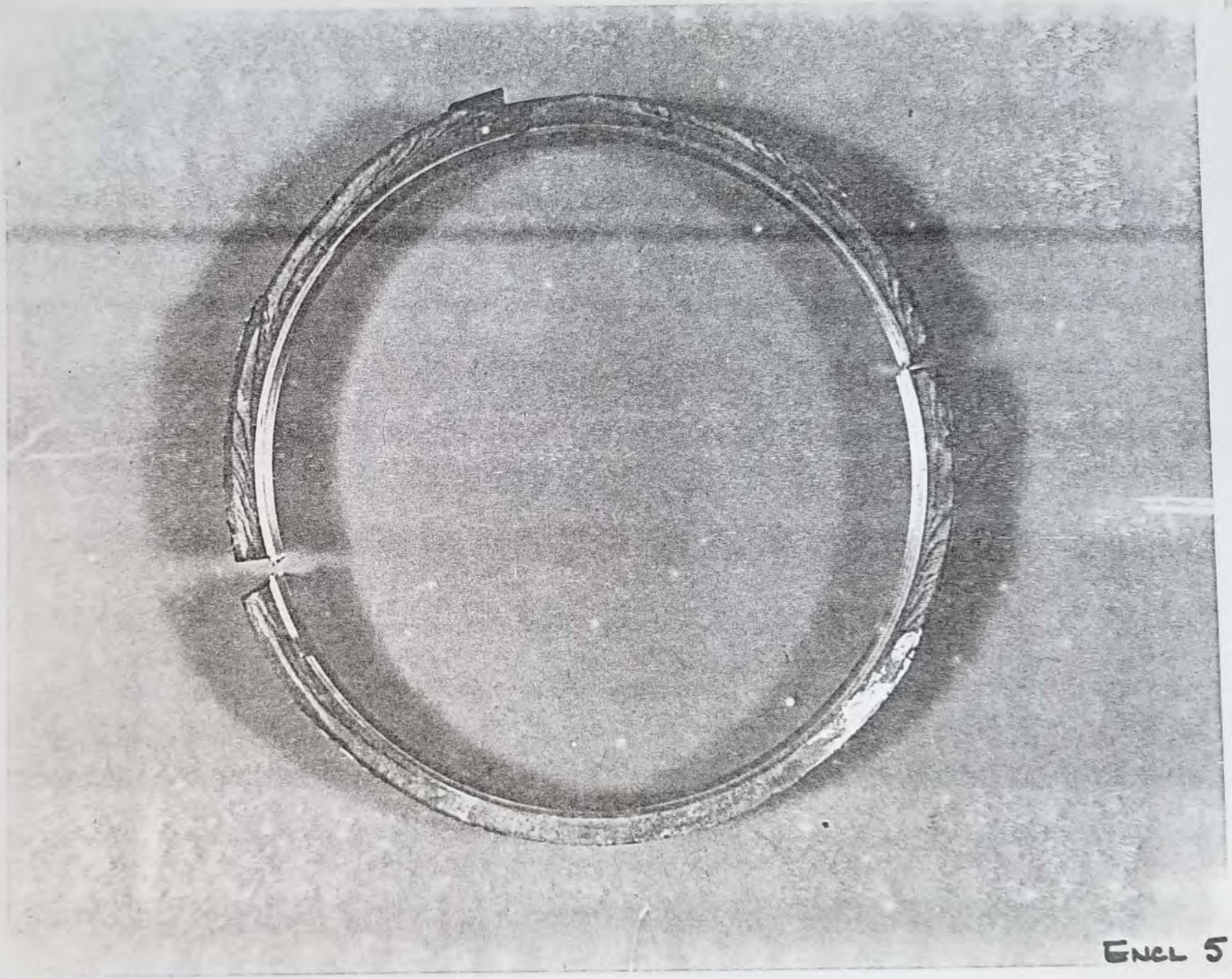
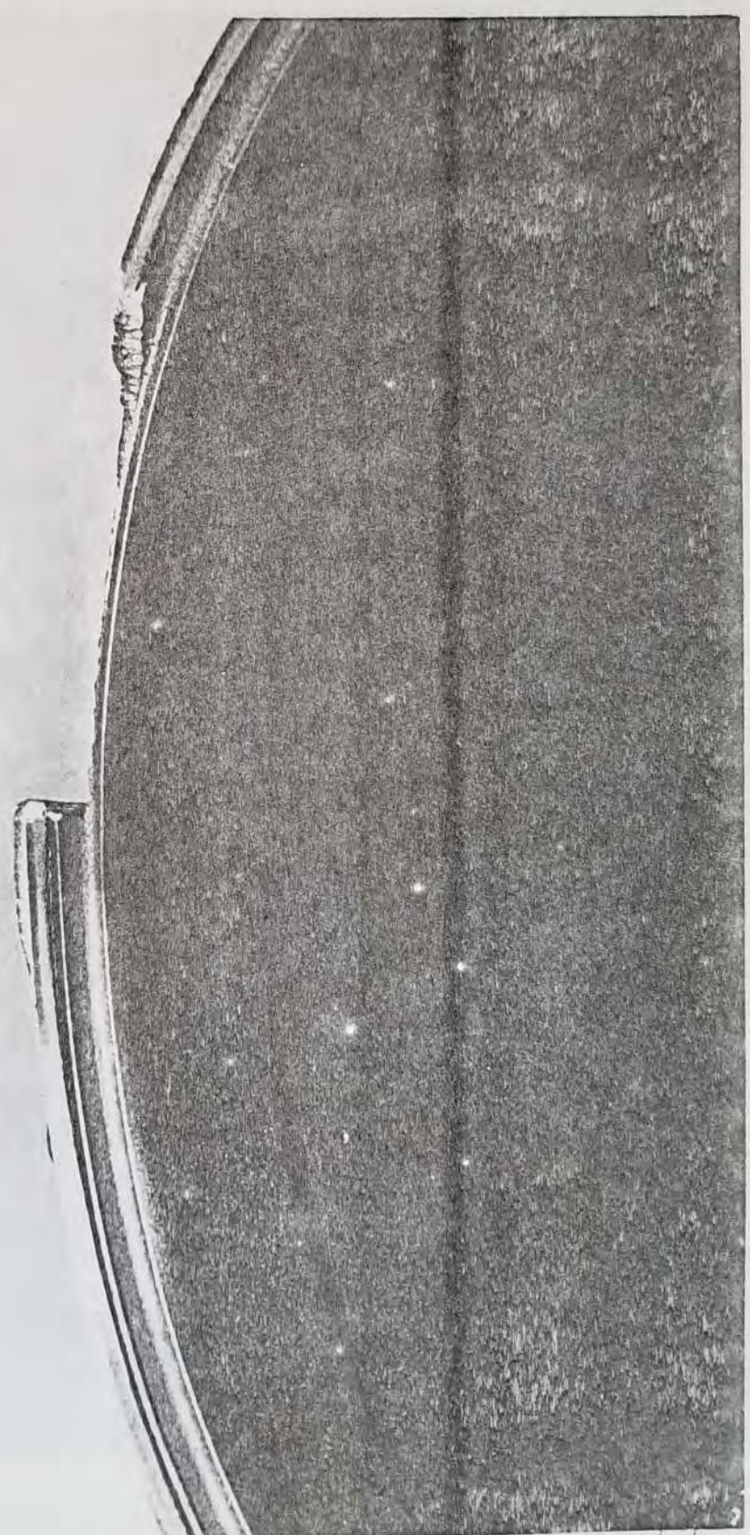
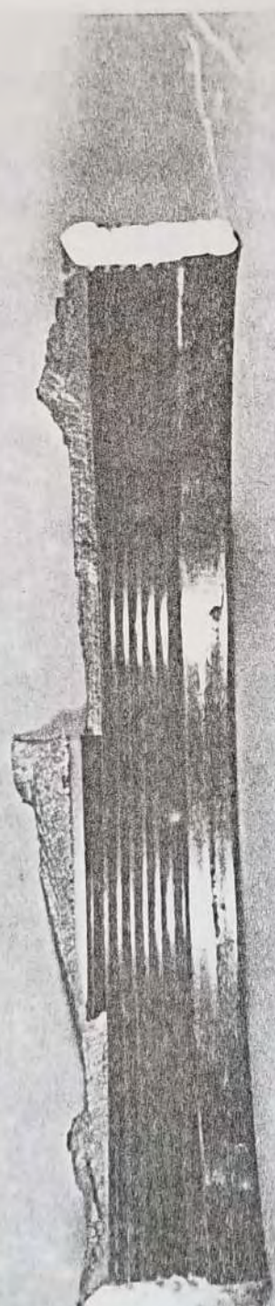


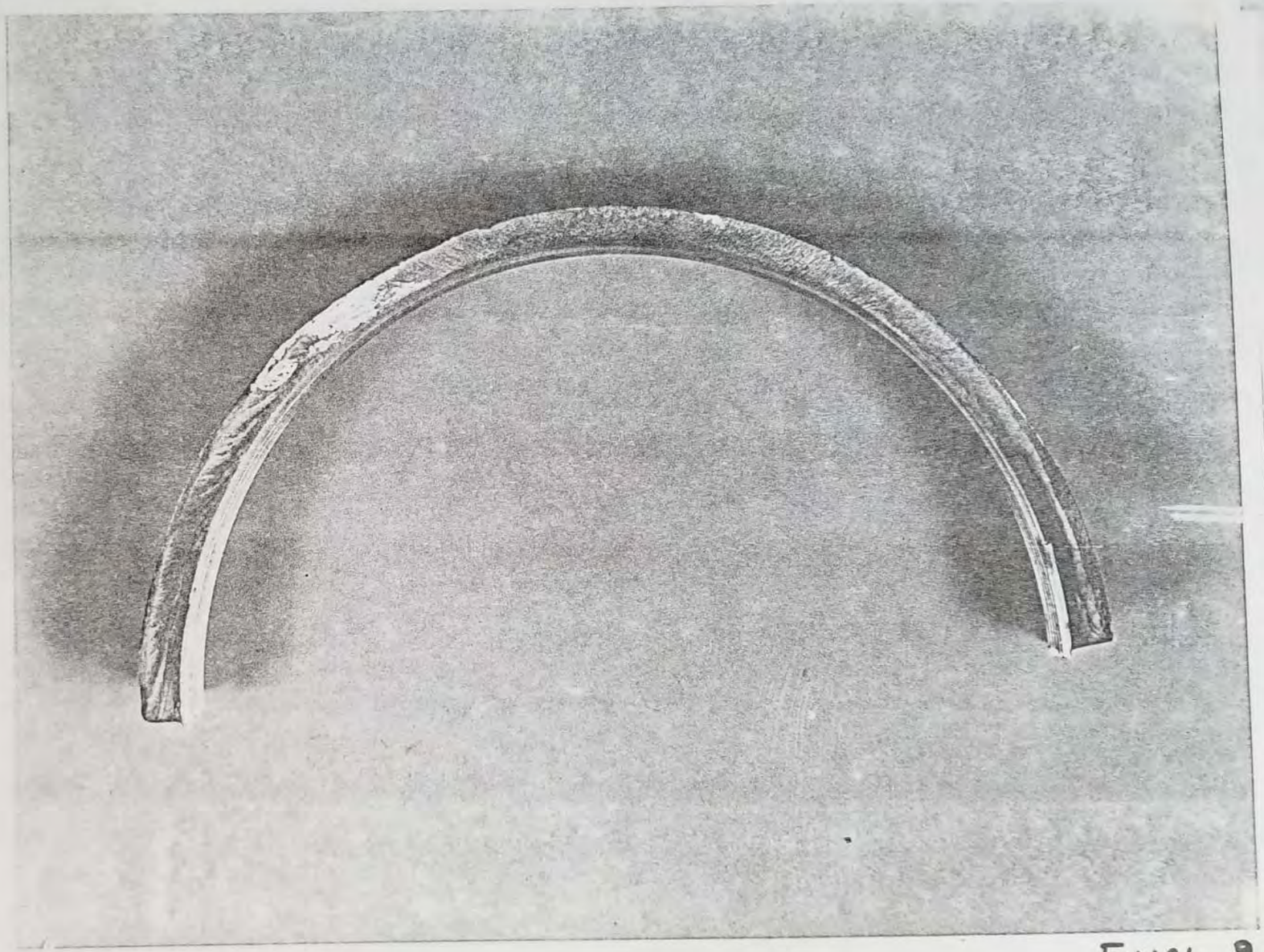
ENCL 5



ENCL 7

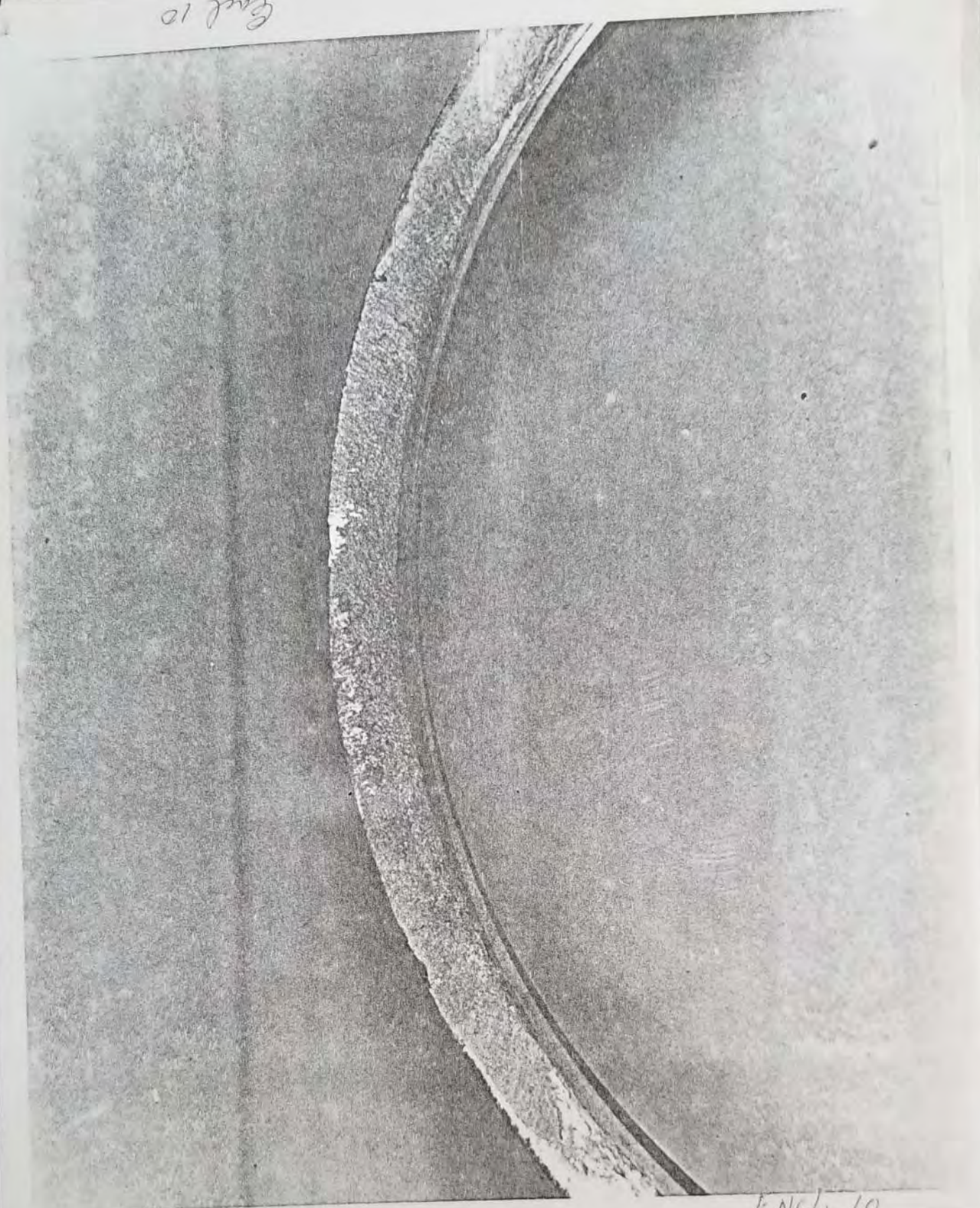


ENCL. 8



ENCL 9

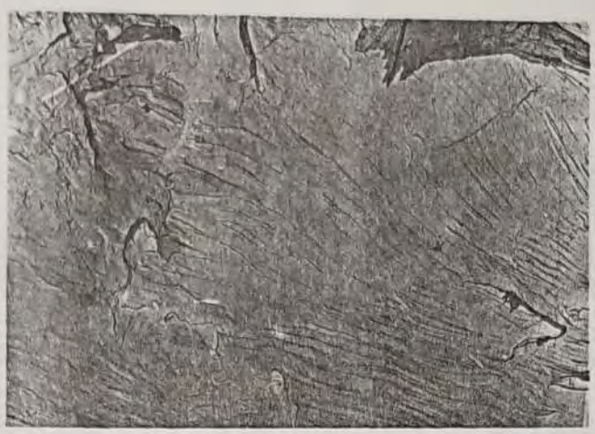
Encl 10



ENCL 10

ENCL 11

MATERIALS & PROCESS LABORATORY
NAVAL AIR REWORK FACILITY
NORTH ISLAND
SAN DIEGO, CALIFORNIA 92135



MAG: 12,000 X

ENCL 12

MATERIALS & PROCESS LABORATORY
NAVAL AIR REWORK FACILITY
NORTH ISLAND
SAN DIEGO, CALIFORNIA 92135

MAG: 500X

ENCL 13

PTTEZYUW RUHJRFA0409 2480308-EEEE--RHMIAAA.
ZNY EEEEE
P 050200Z SEP 75
FM 0505OW NKP APRT TH/SE
TO RHMIAAA/13AF CLARK AB PI/LGMW
INFO RHMIAAA/13AF CLARK AB PI/SE
RUHJSRA/17AD UDORN AFLD TH/SE
BT
UNCLAS E F T O
SUBJECT: HELICOPTER WRECKAGE. REF. TELECON BETWEEN OUR CAPT GAY AND YOUR MSGT BUIJTEN 4 SEP 75. THE FOLLOWING IS INFORMATION YOU REQUESTED CONCERNING HELICOPTER WRECKAGE SN 10933 AND 1626. WE ESTIMATE 12,000 LB FOR EACH HELICOPTER AND EIGHT TO NINE 463L PALLET LOADS FOR EACH.
1. UNCRATED DIMENSIONS FOR 10933:
TWO ENGINES 3 X 3 X 8 FT EACH
LANDING GEAR 3 1/2 X 9 1/2 X 1 FT
ROTOR HEAD 5 X 5 X 7 FT
FIVE CONEXES 6 1/2 X 6 1/2 X 6 FT
ROTOR BLADES
ONE 33 FT LONG
ONE 25 FT LONG

PAGE 2 RUHJRFA0409 UNCLAS E F T O
FOUR 15 FT LONG
THREE 6 FT LONG
9 SHAFT 20 X 1 FT
TAIL SECTION 5 X 5 X 16 FT
HORIZONTAL STABILIZER (REMOVED FROM TAIL SECTION) 1 X 4 X 16 FT
FUSELAGE 5 X 10 X 19 FT
DOOR 3 X 9 X 9 X FT
2. ANCRATED DIMENSIONS FOR 1628:
ONE ENGINE 2 1/2 X 2 1/2 X 8 FT
ONE ENGINE 2 1/2 X 2 1/2 OR 5 DT
ROTOR HEAD 3 X 3 X 6 1/2 FT
TAIL ROTOR 3 X 3 X 5 FT
ONE SHAFT 20 X 1 FT
TTREE CONEXES 6 1/2 X 8 1/2 X 6 FT
CABIN [illegible] X 1 FT
SEVEN FUSELAGE SECTIONS
4 X 11 X 1 FT
[illegible] X [illegible] X 1 FT
[illegible] 1/2 X [illegible] X 3 FT
13 1/2 X 5 X 3 FT

PAGE 3 RUHJRFA0409 UNCLAS E F T O
[illegible] X 5 X [illegible] FT
[illegible] X 9 X [illegible]
[illegible] X 9 X [illegible] FT
DOOR [illegible] X [illegible] X [illegible] FT
DOOR [illegible] X 1[illegible] X 1 FT
TWO TA[illegible] [illegible] X 3 X 6 FT EACH
NOTE: ALL MAIN ROTOR BLADES FOR 1626 WERE SHIPPED TO WARNER ROBINS ALC.
BT

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS THIRTEENTH AIR FORCE (PACAF)
APO SAN FRANCISCO 96274

9 SEP 1975

REPLY TO ATTN OF: SE

SUBJECT: CH-53 Aircraft Wreckage Disposition

TO: 13 AF/JA

The following components were shipped to the CONUS at the direction of Warner Robins ALC, Robins AFB, Georgia.

CH-53 Aircraft, SN 70-1628

COMPONENT	FORWARDED TO
Forward and Aft AFCS Servo	North Island NAVAIR Rework Facility
Collective AFCS Servo	North Island NAVAIR Rework Facility
Lateral AFCS Servo	North Island NAVAIR Rework Facility
Yaw AFCS Servo	North Island NAVAIR Rework Facility
Control Rod	Warner Robins ALC
Main Rotor Blades	Warner Robins ALC
Sleeve and Spindle Assemblies	Warner Robins ALC

CH-53 Aircraft, SN 68-10933

COMPONENT	FORWARDED TO
Sleeve and Spindle Assembly	North Island NAVAIR Rework Facility

Robert V. Hannah, Jr.

ROBERT V. HANNAH, JR., Lt Col, USAF
Chief, Flight Safety

FOR OFFICIAL USE ONLY

Addendum