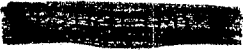


13



FSK  
OPERATION CINCFLFET PORTSMOUTH  
at 091301Z DEC 04

Duty Officer ACTION copy 1 for BROWN M  
YEO COMMS MANAGER  
YEO COMMEN

Prec Act PRIORITY Info: ROUTINE  
DTG 091301Z DEC 04  
From CINCFLFET PORTSMOUTH  
To FSAIC YEOVILTON  
NAS YEOVILTON  
HMS PORTLAND  
NBC DEVONPORT  
POST DEVONPORT

Info  
MODUK  
MODUK NAVY  
CINCFLFET  
2SLCNH PORTSMOUTH  
COMDEVFLOT  
815 SQN  
sics ABA KKL LBL

STAFF  
NAS YEOVILTON FOR WR MESS MANAGER  
DRAKE FOR MESS MANAGER  
MODUK FOR ACNS  
MODUK NAVY FOR DCC(N)  
2SLCNH PORTSMOUTH FOR CMD SEC LAW  
CINCFLFET FOR DACOS OPS  
SUBJ: BOARD OF INQUIRY  
FM COS(W)

1. A BOARD OF INQUIRY COMPRISING THE FOLLOWING OFFICERS IS TO ASSEMBLE AT RNFSaic, RNAS YEOVILTON AT 0930 ON 10 DEC 04:
  - A. CAPT [REDACTED]
  - B. LT CDR [REDACTED] (FLEET HQ)
  - C. LT CDR [REDACTED] (NSFW(RW))
  - D. SURG LT [REDACTED] (RAFCAM)
2. THE BOARD OF INQUIRY IS TO INVESTIGATE THE CIRCUMSTANCES SURROUNDING THE LOSS OF LYNX ZX724.
3. LEGAL ADVICE WILL BE PROVIDED BY LT CDR [REDACTED] (FLEET LEGAL). THE ACCIDENT INVESTIGATION ADVISOR IS ALSO TO PROVIDE A BRIEF.
4. YEOVILTON AND HMS DRAKE ARE REQUESTED TO PROVIDE ACCM FOR THE BOARD AS REQUIRED. POST DEVONPORT IS REQUESTED TO PROVIDE OFFICE SPACE (WITH IT SUPPORT) AND INTERVIEW ROOM FOR BOI USE FROM 11 DEC 04
5. RNFSaic IS TO CONDUCT AN ACCIDENT INVESTIGATION.
6. PORTLAND IS TO MAKE A SHIP'S INVESTIGATION REPORT AVAILABLE TO THE BOARD OF INQUIRY PRESIDENT BY 0930 10 DEC 04. OTHER EXHIBITS WILL BE CALLED FOR AS REQUIRED.
7. POC: FLEET AV CDR [REDACTED]

Action Distribution  
Addressee  
815 SQN

Code Action-Officer Retrieval  
dflt YEOSPECIAL

91424DEC04

PAGE 1



YEO0117.1415/1

[REDACTED]

**BOARD OF INQUIRY INTO THE LOSS OF HMS PORTLAND'S LYNX  
HELICOPTER**

**EXECUTIVE SUMMARY**

**INTRODUCTION**

1. This Executive Summary reflects the key points of the report. The conclusions are based on the circumstantial and documentary evidence, most importantly radar information from the ST ALBANS Combat System Highway Bulk Data Recorder, OA tapes with both radio and ship internal communications from HM Ships PORTLAND, ST ALBANS and MONTROSE and on the statements of the witnesses. The number of witnesses interviewed (27) and the spread of their locations and responsibilities at the time of the accident provided the Board with a comprehensive appreciation of the circumstances surrounding the accident. However in the absence of any type of Accident Data Recorder(ADR)/ Cockpit Voice Recorder (CVR), or any sort of emergency radio report from the crew it has been impossible to identify, at this stage, exactly what events took place within the aircraft in the last minutes of flight. Further understanding of the cause of the accident may arise from the post mortem reports and results of a full investigation by the RNFSAIC.

**NARRATIVE OF EVENTS**

2. Having conducted a flyex from 1535 as part of an OST CASEX on 8 Dec 04, Lynx XZ 724 landed on PORTLAND at 1800 for a Rotor Running Re-Fuel (RRRF). Because of the tactical situation the aircraft was subsequently shut down and placed at Alert 5. While on deck in this state, information was received in PORTLAND concerning a potential Man Overboard (MOB) situation reported by MONTROSE operating in areas to the west of PORTLAND. XZ 724 was re-roled for SAR and the two man crew (Flight Pilot and O2) were joined by the Flight Commander (FC) and Winchman. At 1820 the aircraft launched and transited to the west to join MONTROSE who was acting as the On Scene Commander (OSC) for the SAR operation.

3. E2 joined a very busy frequency when it chopped across to Plymouth Military Air Traffic Control (Ply Mil ATC). At this stage MONTROSE was only now setting watch on the UHF frequency in use, having been passed an incorrect UHF frequency earlier. In the intervening period, ST ALBANS had been in contact with Ply Mil and the air assets but had not formally taken over as OSC. Units operating on Ply Mil were now: Broadway 41 (acting as a communications link), Ply Mil ATC, ST ALBANS, MONTROSE, Lynx 345 (SUTHERLAND flight which was already conducting a datum search) and R193 the Culdrose duty SAR Sea King which was also by now on scene and on task. The helicopters involved in the search were establishing their own mutual height separation. There were a great many radio calls on the frequency, many of them lengthy and much overtalking, with units working hard to establish and maintain situational awareness. At 1858 Lynx 345 went off task to refuel onboard ST ALBANS and XZ 724 descended to 100' to commence a visual search in the vicinity of the MOB datum established by MONTROSE. At 1903:30,

[REDACTED]

after completing two orbits of a search pattern and approximately 2 minutes after reporting level at 100', XZ 724 crashed into the sea. No emergency report was received from the aircraft.

## DISCUSSION

4. There were no survivors from the helicopter crew. Evidence has been gathered from key witnesses, radar data tapes from ST ALBANS and initial technical accident investigation findings. The witness interviews took place between 2½ – 5 days after the accident.
5. The wreckage of the aircraft was found and initially surveyed on the sea floor using RN MCMV Remotely Operated Vehicles (ROVs). This revealed that the bulk of the aircraft was upright on the seabed in one location but extensively damaged. The damage profile and the data obtained from radar tapes of the aircraft track indicate that it impacted the sea with low forward speed and an extremely high Rate of Descent (ROD).
6. Initial technical investigation of the wreckage by the RNFSAIC indicates that neither engine was providing significant power to the rotor system at the time of impact and both appear to have been shut down i.e. both of the Engine Condition Levers (ECLs) had been physically retarded by the crew prior to the accident. This action is contained in the Lynx aircrew emergency drills where it is part of what is designated as "Crash Checks".
7. Carrying out Crash Checks at low level over the sea at night is extremely hazardous and the Board considered the crew would have undertaken this action only if they were firmly convinced they were dealing with a major emergency.
8. In arriving at this opinion the Board considered:
  - a. The potential for a crew member having deliberately shut down the engines in the absence of any emergency. There is no indication in any of the evidence gathered to date to suggest that any of those onboard were in an abnormal state of mind necessary to carry out such an action.
  - b. The possibility that the descent to 100' had inadvertently been continued until the aircraft had impacted the sea, i.e. Controlled Flight Into Terrain (CFIT). There is no crash damage to support this theory and the Observer had made 2 radio calls reporting level at 100'.
  - c. The possibility that the aircraft might have inadvertently descended from 100' while conducting its visual search and made fleeting contact with the sea. In this circumstance, had the aircraft remained airborne, it is felt the crew would have wanted to maintain power and climb to a safe height to troubleshoot, rather than shut down the engines.
9. [REDACTED] the pilot, had a flying medical category of A2 (CFS), which required him to fly wearing Service Flying Spectacles due to his poor visual acuity. He was thought to wear contact lenses at times but the Board have not been able to determine

[REDACTED]

if he specifically wore contact lenses when flying and indeed was wearing them at the time of the accident. The Board considers that [REDACTED] was not wearing approved visual correction at the time of the accident.

10. The Board also considered evidence concerning human factors and environmental conditions on the night, and observed two Lynx simulator sorties in which the Board Pilot carried out both day and night profiles similar to those flown by the aircraft prior to the accident. This has led the Board to the opinion that the crew were dealing with a major, or perceived major, aircraft emergency in the last few seconds of flight and that the accident did not occur through inadvertent descent into the sea i.e. CFIT. Given that the precise nature of the actual or perceived emergency is not known at this stage firm conclusions cannot be drawn about the aircrew reactions to it. It can be estimated however that the flight environment experienced by the crew, i.e. slow speed, low level flight on a very dark night over the sea, made the response to and handling of any real or perceived major malfunction extremely difficult.

### MAIN CONCLUSIONS

11. The probable cause of the accident was departure from controlled flight following emergency action taken in response to an actual or perceived major aircraft malfunction.

12. The flight environment experienced on the night of the accident was challenging and disorientating but within the limits and capabilities of the crew.

13. Absence of any type of ADR/ CVR, or any sort of emergency radio report from the crew made it impossible to identify exactly what events took place within the aircraft in the last minutes of flight.

14. It is unlikely that pure disorientation, a minor malfunction or a combination of the two caused the crew to mis-diagnose a major failure and carry out the Crash Checks erroneously.

15. When flying at 100/60kts at night it is almost impossible to recover from a major malfunction that requires or causes the shutting down of both engines.

16. The Board deems that the SAR sortie was correctly authorised and the crew were correctly constituted for the task.

17. C2 of complex multi-unit SAR operations can present challenges to ship command teams and aircrews; these situations are not trained for in CTT, or Tier 1 or 2 training.

18. The Pilot was not wearing approved visual correction. The Board cannot determine if this was a contributing factor to the accident.

19. The Winchman was flying with an unserviceable STASS. The Board considered that this did not contribute to or cause the Winchman's death.

[REDACTED]

20. The MS 5 was stowed in a non-standard and unsafe manner. The Board considered that this was not the cause or a contributory cause of the accident. -

### MAIN RECOMMENDATIONS

21. The accident investigation should be continued by the RNFSIAIC in order to further determine the cause of the accident.
22. Consideration should be given to including live or simulated complex multi-unit SAR operations in command team training schedules.
23. The policy of operating RN aircraft without crashworthy ADR/CVR should be reviewed.
24. The Lynx Simulator low level, night malfunctions syllabus should be reviewed to include low speed malfunctions that culminate in power off ditchings.
25. Procedures concerning corrected vision for aircrew should be re-emphasised to both medical personnel and aircrew.