MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

6/88

July 13, 1988

AIRCRAFT ACCIDENT TO ROYAL AIR FORCE BUCCANEER S2B XW540

Date:	22 April 1987
Parent Airfield:	RAF Lossiemouth
Accident Location:	North Sea, 25 miles off Wick
Crew:	Two
Casualties:	Two killed

CIRCUMSTANCES

1. On 22 April 1987 a formation of 2 Buccaneers took off from RAF Lossiemouth for a night training sortie. After completing a successful attack on Tain weapons range, the pair joined up over the North Sea in night tactical formation and positioned for a low-level simulated anti-ship attack. Visibility in the area was good, but an overcast sky made it very dark, with no discernible horizon.

2. After the leader had designated the target, the pair began accelerating and descending to their attack positions. The leader called a height check at 1,000 ft and another when steady at 600 ft and 480 kts. At the normal range from the target, he called the formation to split and the No 2 turned away as planned to widen from the leader before turning back towards the target. Shortly afterwards, at a time when the manoeuvre should have been completed, the No 2 navigator called for a heading check. This was duly given by the leader but was not acknowledged. Within 10 seconds of the transmission, an elongated

monitoring of his own flight instruments should have provoked a warning to the pilot. However, the Buccaneer cockpit has a wide instrument scan and poor lighting (particularly of the radio altimeter). This, together with the in-cockpit tasks connected with the simulated attack, may have distracted the crew to such an extent that they failed to notice the height loss.

SUBSEQUENT ACTION

7. Provision of a new radio altimeter system for the Buccaneer is under consideration. Meanwhile, the lighting of the existing system has been improved.

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fireball was seen along No 2's expected track. The leader, realising that his No 2 had crashed into the sea, transmitted a MAYDAY and orbited the position.

3. An immediate and intensive search was carried out by the rescue services. The pilot's body was recovered the following morning but that of the navigator was not found. Major items of the aircraft were subsequently found and recovered.

CAUSE

4. Examination of the recovered wreckage indicated that the aircraft had hit the sea in a flat and essentially wings level attitude, but gave no obvious clue to the origins of the accident. From the known circumstances, it was concluded that the accident was probably due to the crew being absorbed in a high cockpit workload/looking for the formation leader, to the extent they were unaware of their proximity to the sea's surface. It is possible that the crew's perception of their height was affected by pressure instrument failure.

5. Buccaneer radio altimeters overread in turns above 20 deg angle of bank and the pilot would have been flying the formation split manoeuvre using pressure instruments, having previously set the altimeter to a reading obtained from the radio altimeter in wings level flight. However, it is possible that failures of the pressure instrument system could have resulted in freezing of the altimeter and vertical speed indicator displays without any accompanying warnings.

6. Unless there had been an insidious failure of the system, an inadvertent height loss, however caused, should have been indicated by illumination of a radio altimeter low height warning light. Moreover, the navigator's routine