



# MINISTRY OF DEFENCE

## Military Aircraft Accident Summaries

12/88

October 27, 1988

### AIRCRAFT ACCIDENT TO ROYAL AIR FORCE HARRIERS XZ136 & XV790

Date:	2 November 1987
Parent Airfield:	RAF Gutersloh, Federal Republic of Germany
Place of accident:	Otterburn, United Kingdom
Crew:	One in each aircraft
Casualties:	Two Fatal

### CIRCUMSTANCES

1. The pilots of XV790 and XZ136 were briefed as Nos 3 and 4 of a formation of six Harriers. The formation planned to carry out a co-ordinated attack at Otterburn range. From an initial reference point, even numbered aircraft were to follow a track almost direct to the target while odd numbered aircraft were to take a slightly longer offset route to achieve a sequenced separation of the aircraft over the target. The attack order was to be 2, 1, 4, 3, 6, 5.
2. The sortie progressed as planned and the formation elements arrived at the reference point in the correct order. No 2 overflew the target and No 1 attacked eight seconds later. After a delay of 16 seconds, Nos 3(XV790) and 4(XZ136) attacked simultaneously. The aircraft collided almost directly over the target and hit the ground very shortly afterwards. Both pilots were killed.

### DETERMINATION OF CAUSE

3. The accident was seen by several eye witnesses and recorded on video and, the investigation was able to discount the weather or other natural operating

hazards. Both aircraft appeared to be under control until the collision and pilot incapacitation was therefore improbable.

4. By the nature of the attack plan, small differences in speed or track during the attack run could have accounted for the aircraft arriving over target simultaneously, although failure to achieve the desired separation should not in itself have caused an accident. However, it was considered distraction could have played a part. Confusion over collision avoidance was also a possibility and either pilot may have been deceived in some manner into the belief that it was safe to continue his attack.

5. The investigation concluded that the cause of the accident was that the pilots failed to avoid each other as briefed. A contributory cause was that the attack plan contained hidden flaws:

- a. It was conceived as a visual plan; in effect it was not.
- b. It required a degree of precision in its execution which, in the event, was difficult to achieve.
- c. The final safety measure of briefed collision avoidance responsibilities was vulnerable to compromise through distraction or deception.

#### SUBSEQUENT ACTION

6. Separation criteria and procedures for Harrier attacks have been reviewed.

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