



## MINISTRY OF DEFENCE

### Military Aircraft Accident Summary of a Royal Air Force Board of Inquiry

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Aircraft:	Hawk T1 XX302
Date of accident:	26 May 1996
Place of accident:	Beja Air Base, Portugal
Casualties:	1, minor

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#### Synopsis

1. XX302 was part of a formation of aircraft participating in a simulated airfield attack as part of an air display at Beja Air Base, Portugal. Immediately after completing the attack, the pilot pulled the aircraft into a pre-planned climb and, three seconds later, struck one of a pair of Portuguese Air Force F-16s which were overhead the airfield. Unable to control his aircraft, the pilot of the Hawk ejected successfully. The F-16 landed safely at Beja. The Board of Inquiry concluded that the accident had been caused by failure of the two pilots to see each other's aircraft in time to avoid a collision. There were, however, a number of contributory factors and these included inadequacies in the preparation for the sortie by the detachment commander and failures in co-ordination by the authorities organising the air display.

#### Background

2. XX302 was one of a number of Hawks from RAF Valley which had detached to Beja to participate in the "Tiger Meet", an annual gathering of personnel and aircraft from those NATO squadrons which feature a tiger as the squadron emblem. As part of the flying display at the associated air show, all the "Tiger Meet"

participants were to take part in a co-ordinated simulated airfield attack after which the intention was to join up in formation to carry out a mass flypast. A number of briefings were held during the days preceeding the air show and a practice took place the day before the display.

### **Circumstances**

3. On the day of the air show the weather was excellent, with a cloud-free sky and visibility of over 60 km. The Hawk formation took off as planned with no problems. During the run-in to the simulated attack, the pilot of XX302 saw two F-16s overhead the airfield heading west (as did a number of other pilots taking part in the attack) and assumed that, as they had not been mentioned in the display briefings, they were leaving the area. He did not therefore report the sighting to the rest of the formation. He completed the simulated attack as planned and then began to climb the aircraft whilst maintaining visual contact with his formation leader. Three seconds later, XX302 struck one of the F-16s and, since the aircraft appeared not to respond to control inputs following the impact, the pilot ejected.

### **Aircraft damage**

4. The Hawk crashed four kilometres northwest of the airfield and was destroyed. The F-16 sustained minor damage to the left hand tailplane stabiliser and the pilot was able to land the aircraft safely.

### **Rescue operation**

5. The ejection sequence functioned correctly and, on landing, the pilot was picked up by a Portuguese Air Force helicopter and taken to hospital in Lisbon for routine checks.

## Investigation

6. The Board of Inquiry had much evidence available to draw upon, including information from the Accident Data Recorder and the statements by the Hawk pilots and other display participants. It was immediately apparent that the direct cause of the accident was the failure of both pilots to see each other's aircraft in time to take avoiding action. However, it emerged during the investigation that a number of factors contributed significantly to the accident. Prime amongst these was the poor co-ordination by the display organiser and failures in the command and management of the Hawk detachment by the detachment commander.

7. The Inquiry established that, although attack profiles were not specifically briefed by the display organisers, all of the display participants had planned a level attack at 500 ft., apart from the Hawks, which were to carry out a coordinated dive attack profile. At the end of the simulated attack run, the Hawk formation was intending to pull up and hold to the southeast of the airfield prior to joining up with other participants for the mass flypast. Although the Hawk detachment commander had briefed the mass attack leader accordingly, he was not told of any restrictions governing the maximum height for the Hawk formation's climb nor that the F-16s were to be flying in the same area.

8. This failure was exacerbated by the detachment commander's decision to carry out the dive attack with only five seconds separation between each of the Hawks. This represented a significant departure from the 15 seconds separation briefed by the mass attack leader, and the Inquiry's view was that this reduction in separation required the Hawk pilots to concentrate on other aircraft within the same formation to the extent that it degraded their ability to maintain a good general look out. It also became clear to the Inquiry that, in planning the simulated attack, the

detachment commander did not attend all the available briefings, thereby missing a number of opportunities to discuss the chosen attack profile with other participants and, moreover, he did not participate in the practice sortie the previous day.

9. The Inquiry also considered the level of briefing provided to the display participants and concluded that insufficient emphasis had been placed on the presence overhead the airfield of the two F-16s. Although they were mentioned in the initial, scene-setting overview, they were not discussed in the subsequent, detailed briefing session. In addition, the Inquiry concluded that there was a lack of co-ordination between the mass attack leader and the display organisers, with each being unaware of the other's detailed arrangements. The pilot of the F-16, for example, was not briefed on the intentions of the Hawk formation and, as a result, was expecting the entire simulated attack to be carried out using a level profile.

### **Safety recommendations**

10. Standing Instructions regarding the participation of HQ Personnel & Training Command aircraft in "Tiger Meets" have been amended and, in future, aircraft participation will be restricted to static displays only.