



# MINISTRY OF DEFENCE

## Military Aircraft Accident Summaries

32/90  
6 December 1990

### MILITARY AIRCRAFT ACCIDENT SUMMARY

### AIRCRAFT ACCIDENT TO ROYAL AIR FORCE

#### HAWK XX347

Date: 9 May 90  
Parent Airfield: RAF Valley  
Place of Accident: RAF Valley  
Crew: One  
Casualties: 1 Minor

### CIRCUMSTANCES

1. On 9 May 90 a foreign student took off in a Hawk for a solo general handling sortie. The take-off proceeded uneventfully until after the undercarriage was raised. During the first 20 seconds of flight, the aircraft pitch attitude had increased to the unusually high angle of +16°. When the pilot attempted to lower the nose, the control column felt abnormally stiff so he used nose-down trim to help but, when he stopped trimming the control column continued to move forward. He, therefore, attempted to pull it back, resorting to two hands, but felt that it was "too heavy". He saw the nose dropping and felt negative G and, having estimated that he was at 400 ft and 230 kts, he transmitted a brief Mayday call, closed the throttle and ejected.

2. The aircraft continued to arc downwards and crashed into an area of tidal mud flats, disintegrating on impact. Meanwhile, the pilot descended by parachute and landed on an area of wet sand. He suffered only minor injuries although he was in a state of severe shock.

### CAUSE

3. The most likely cause of the accident was the failure of the pilot to maintain adequate pitch control of the aircraft. However, due to the fragmentation of the wreckage, it was impossible to rule out totally the possibility that mechanical failure was the cause. It was felt likely that the following sequence of events took place. After take-off the pilot realised that the aircraft was climbing too steeply and he corrected this error by applying nose down trim; a technique that is not approved. The length of time it took for the aircraft to respond to the trim input resulted in the pilot applying full nose-down trim, so that, when he then tried to raise the nose again, he mistakenly diagnosed the strong pull force needed as being a control restriction. Believing that his aircraft was now uncontrollable, the pilot ejected.

SUBSEQUENT ACTIONS

4. As a result of the crash, the aircraft was totally destroyed. The pilot has returned voluntarily to his native country and resumed his former job as a helicopter pilot.

5. An airborne demonstration of the effects of full nose down trim is being introduced to the Hawk training syllabus. At present the demonstration is given in the simulator.

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