



MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

7/89

August 7, 1989

ACCIDENT TO ROYAL AIR FORCE JET PROVOST XN547

Date: 8 March 1989
Parent Airfield: Royal Air Force Linton-on-Ouse
Place of Accident: Kirby Misperton, N Yorkshire
Crew: 1 pilot
Casualties: Nil

CIRCUMSTANCES

1. A student pilot on a solo general handling sortie in a Jet Provost T Mk 3A lost control of the aircraft during an aerobatic sequence being performed at about 9000 ft and was unable to recover the aircraft to normal flight. The aircraft descended rapidly and the pilot decided to eject as he approached 5000 ft. He landed successfully by parachute and the aircraft crashed in open farmland.
2. The pilot was relatively inexperienced, but he had been briefed and had previously practised with an instructor the exercises he was undertaking. The aerobatic sequence proceeded normally until a stall turn to the left was attempted. The aircraft was slightly right wing low in the vertical and failed to yaw left in spite of full rudder. At the point when the airspeed decayed to zero the pilot correctly centralised the controls. The aircraft hammerheaded forwards and fell through the vertical to an inverted position from which it yawed violently. The pilot diagnosed that he was in an inverted spin and took the recommended recovery action. However, the aircraft continued to spin and he

abandoned the aircraft when he realised the height remaining was insufficient to execute recovery.

CAUSE

3. The accident was caused because the student pilot inadvertently induced an entry to an inverted spin from which he could not recover in the height available.

4. After the vertical stall caused by the failed stall turn in the aerobatic sequence, the aircraft pitched forward through the downward vertical to an inverted position at an attitude of 30° to the horizontal. The pilot had relieved control buffet during this manoeuvre by moving the control column slightly forward. Unfortunately this position of the controls held the aircraft momentarily in an inverted stall from which it departed into an inverted spin. The subsequent aircraft motion was very disorientating and visual clues were conflicting with no horizon from the inverted position. The pilot was experiencing negative 'g' and although he believed his control positions were neutral, he was holding a small input of down elevator during the descent which was sufficient to prevent the aircraft recovering from the inverted spin.

SUBSEQUENT ACTIONS

5. The aircraft crashed in a steep spiral dive on open farmland and was totally destroyed.

6. The inverted spin is not a practised exercise and the introduction of such a thoroughly disorientating manoeuvre is not recommended as part of the training programme. The importance of regular briefings on the correct recovery actions from an incipient inverted spin have been re-emphasised. The immediate action of centralising the controls will recover the aircraft and there is no justification for any change to this drill.

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