



MINISTRY OF DEFENCE

14

Military Aircraft Accident Summary

MILITARY AIRCRAFT ACCIDENT SUMMARY

AIRCRAFT ACCIDENT TO ROYAL AIR FORCE

HARRIER GR5 ZD412

Date: 30 September 1991
Parent Airfield: RAF Gutersloh, Germany
Place of Accident: RAF Gutersloh
Crew: One Pilot
Casualties: 1 Major

CIRCUMSTANCES

1. Harrier aircraft ZD412 was No2 of a formation of two Harriers tasked to fly to an Air Weapons Range and drop practice weapons. Both pilots were Qualified Weapons Instructors who carefully planned and discussed the sortie profile. The formation leader planned to fly a Short Take-Off (making use of vectored thrust) and they decided that the No2 should fly a Conventional Take-Off because of the configuration of his external stores. The sortie brief was thorough and covered details of the planned Conventional Take-Off. The leader took-off, followed by the No2 at an interval of 10 secs. The pilot of the No2 aircraft, as he approached take-off speed, eased the control column back. However, with the control column held fully back, the aircraft exhibited none of the usual aerodynamic signs of the Harrier as it approaches wing-borne flight, so the pilot aborted the take-off. He closed the throttle, called for the emergency net barrier at the end of the runway and attempted

to slow the aircraft using wheel-braking but not Power Nozzle Braking. When it became inevitable that the aircraft would enter the barrier at high speed, the pilot ejected, in accordance with the guidance given in the Harrier Aircrew Manual, leaving the aircraft to engage the barrier. The barrier failed after deploying to its full extension, which resulted in the aircraft overshooting the runway and coming to rest in the Ems Canal. The pilot sustained major injuries and the aircraft suffered Category 4 damage.

CAUSE

2. The cause of the accident was the pilot's decision to abort the Conventional Take-Off with insufficient runway remaining to halt the aircraft before it engaged the net barrier. The absence of the usual cues of approaching wing-borne flight totally convinced the pilot that his aircraft was incapable of controlled flight. The aircraft was travelling at high speed, accelerating rapidly and, in the circumstances, the pilot considered that he had only one option available, that was to abort the take-off. The Accident Data Recorder indicated that the aircraft's engine and control system were functioning normally; no technical failures were discovered and the aircraft had been correctly prepared for flight.

SUBSEQUENT ACTIONS

3. The information in the Harrier performance manual will be

reviewed to provide additional and more refined data concerning Conventional Take-Offs. The Harrier Aircrew Manual will provide more information concerning the Harrier Conventional Take-Off technique and simulator training has been reviewed to include regular practise of take-off abort procedures.