



**MINISTRY OF DEFENCE**  
**MILITARY AIRCRAFT ACCIDENT SUMMARY**

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**AIRCRAFT ACCIDENT TO ROYAL AIR FORCE JAGUAR  
GR1A XZ111**

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<b>AIRCRAFT:</b>	<b>RAF Jaguar GR1A XZ111</b>
<b>DATE:</b>	<b>27 October 2000</b>
<b>LOCATION:</b>	<b>5nm North-East of Dumfries</b>
<b>PARENT UNIT:</b>	<b>6 Squadron, RAF Coltishall</b>
<b>CREW:</b>	<b>One - pilot</b>
<b>INJURIES:</b>	<b>One - major</b>

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Issued by: Directorate of Air Staff, Metropole Building, Northumberland Avenue, London, WC2N 5BP

November 2001



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**SYNOPSIS**

1. Whilst flying at low-level, the pilot of Jaguar XZ111 saw a densely packed flock of birds directly in front of his aircraft. The aircraft struck the birds, following which the pilot noted a marked deceleration accompanied by indications of excessively high temperature in both engines. Having failed to recover the aircraft, the pilot ejected, sustaining major injuries. XZ111 crashed into open countryside, and was totally destroyed.
2. The RAF Board of Inquiry concluded that the accident was caused by catastrophic failure of both engines as a result of multiple birdstrike.

## **BACKGROUND**

3. XZ111 formed part of a pairs Operational Low Flying (OLF) sortie conducted in Low Flying Area (LFA) 20(T). The weather was suitable for such a sortie with a cloud base of 1500ft, 15km visibility, and a westerly wind of 20-25 knots. The pilot was a Royal New Zealand Air Force exchange officer who was Combat Ready on the Jaguar and had extensive low-level flying experience. Bird activity, as witnessed by both pilots during the sortie up to the time of the accident, was not unusual.

## **CIRCUMSTANCES**

4. The sortie proceeded normally until, towards the end of the low-level route, the pilot was suddenly confronted by a large, densely packed flock of birds. He only had time to duck his head and make a very slight aft control column input before he felt and heard the impact of the birds. The aircraft decelerated rapidly and the pilot noted that both engines had surged. The pilot shut down both engines and attempted to relight each in turn. He also jettisoned the empty external fuel tanks after first ensuring that they would land in an unpopulated area. As the relight attempts failed, and as the aircraft was nearing the ground, the pilot ejected.

## **INVESTIGATION**

5. Without the benefit of an Accident Data Recorder (ADR), and because there was no video footage of the accident events despite the Head Up Display (HUD) video being recovered, the evidence available to the Board was limited. However, the aircraft's engines remained relatively intact and were examined by a team from the Rolls-Royce Defects Investigations Department. The Rolls-Royce team discovered a significant amount of damage in both engines, together with the remains of birds. The damage explained the loss of engine thrust reported by the pilot, and was so extensive that a successful relight of either engine would not have been possible.

## **SAFETY RECOMMENDATIONS**

6. The Board made a number of recommendations, which included providing guidance on how information on increased bird activity should be displayed to aircrew, and reviewing the realism of engine emergencies as displayed in the Jaguar simulator.

## **OBSERVATION**

7. The pilot's actions in attempting to recover the aircraft, whilst seeking to reduce the risk of collateral damage, were commended.