



MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

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ACCIDENT TO ROYAL AIR FORCE JAGUAR XX 768

Date: 29 September 1982
Parent Airfield: RAF Bruggen
Place of Accident: 6 nm South of RAF Wildenrath
Crew: One Pilot
Casualties: Nil

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S/76787	
623.746 : 656.7.08	
GB MOD. PR	
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Circumstances

1. Jaguar XX 768 flew as the No 2 in a formation of 4 aircraft on a low-level training sortie. As the aircraft was approaching the first simulated target at a height of 250 feet above ground level, the pilot heard a bang from the right hand side of the aircraft. He put the aircraft into a shallow climb and, on checking his instruments, noticed that the right hand engine Exhaust Gas Temperature (EGT) was increasing. He put the throttle to idle and both the RPM and EGT indications returned to normal. The pilot considered that a minor surge had occurred, and, while his leader carried out a visual inspection for any damage, checked the engine performance in accordance with established procedures. Though the inspection revealed no damage nor any abnormalities in engine performance the pilot decided to return to base as a precautionary measure. He selected a mid-power setting on the right hand engine and jettisoned fuel to reduce the aircraft's weight in preparation for landing.
2. Twenty minutes later with the aircraft's weight reduced the pilot was about to commence his recovery to RAF Bruggen when a very loud bang occurred accompanied by heavy vibration. With the right hand engine EGT indication increasing the pilot again retarded the throttle to idle. However, the right engine fire warning light illuminated, and so he operated the fire extinguisher and selected reheat power on the left engine. The right engine fire warning light went out but shortly afterwards the right engine reheat fire warning caption illuminated, and the left engine fire warning light flickered. The pilot felt a succession of muffled thumps from the rear of the aircraft. Eyewitnesses on the ground saw the aircraft trailing a plume of flame and noticed an object fall from it. Meanwhile, the level of vibration made it difficult for the pilot to read his instruments but he noticed that the left engine RPM indication had decreased to zero, a number of electrical equipments had failed and a temporary radio failure occurred.

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3. His belief that the aircraft was on fire was confirmed by the pilot of another Jaguar who had been directed to assist following an earlier emergency call. Realising that ejection was imminent, the pilot turned away from built-up areas. He attempted to roll the wings level but the control column stiffened and to obtain a response he used rudder to stop his turn. With the aircraft pointing towards open countryside, he ejected; the aircraft crashed into open farmland and was destroyed. The pilot, uninjured apart from minor bruising, was quickly rescued by an RAF helicopter.

Cause

4. The Board of Inquiry determined that the cause of the accident had been a fatigue failure of a first stage compressor stator vane in the right hand engine. This resulted in a progressive break-up within the engine and led to an extensive fire in both engine bays and the rear fuselage.

Subsequent Actions

5. The pilot followed the correct procedures and on his reasonable diagnosis of an engine surge could have continued his planned mission. Aircrew have, therefore, been advised by means of an amendment to Flight Reference Cards to treat a surge in similar circumstances to this incident as incipient mechanical failure in which the aircraft should be landed and the engine closed down as quickly as practicable.

6. A non-destructive testing technique has been introduced to check the first stage compressor stator vanes for fatigue damage at regular intervals. As an interim measure, existing stator assemblies are being modified to prevent vane detachment; new build assemblies will incorporate re-designed stator vanes.

Claims

7. One advance payment of £286 has been paid and four others are still under consideration.

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