MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

24/88

December 19, 1988

AIRCRAFT ACCIDENT TO ROYAL AIR FORCE LIGHTNING F6 XR763

Date:	1 July 1987
Parent airfield:	RAF Binbrook
Place of accident:	RAF Akrotiri, Cyprus
Crew:	One
Casualties:	Nil

CIRCUMSTANCES

1. On 1 July 1987 the pilot of Lightning XR763 was tasked to carry out a live gunnery sortie from RAF Akrotiri against a towed target banner. The first 2 passes were normal, but in the course of his breakaway manoeuvre after the third the pilot saw a black circular object detach from the banner. Despite tightening the turn, the pilot was unable to avoid hitting the object which he felt strike the aircraft beneath his feet. Immediately, the No 1 engine RPM fell to zero and the jet pipe temperature (JPT) rose above 900 degrees. Realising that the No 1 engine had seized, the pilot shut it down, transmitted a MAYDAY call and turned to return to Akrotiri airfield.

2. Whilst in transit to Akrotiri, the pilot carried out a low speed handling check of the aircraft which revealed no abnormal characteristics. However, shortly afterwards the pilot became aware that the JPT were of his No 2 was

much higher than normal. At about 2.5 miles from the Akrotiri runway, the pilot felt a marked loss of engine thrust and was forced to apply full power in an attempt to maintain speed and height; there was no apparent increase in thrust. In a final attempt to increase power the pilot attempted to use reheat but this would not light. Realising that he could not reach the runway, the pilot transmitted that he was losing power and would have to eject. He then turned the aircraft to the right, away from Akrotiri village, levelled the wings and, at approximately 250 ft and 150 knots, ejected. The aircraft continued for a short distance in a shallow dive with the right wing low, before crashing in a vineyard and exploding. The pilot's ejection was successful and he did not sustain serious injuries.

CAUSE

3. On inspection of the target banner it became evident that a round had struck the upper wheel mounting, shattering it and releasing the wheel and half of its mounting. Examination of the aircraft wreckage revelaed marks on sections of the engine air intake which matched the thickness of the wheel. It was concluded that ingestion of the top wheel of the spreader bar had caused the No 1 engine to seize almost instantaneously whilst running at high power. During seizure, it appeared likely that debris from the No 1 engine was in turn ingested by the No 2 engine. Damage to No 2 engine was consistant with such progressive disintegration resulting in the decreasing thrust and increasing JPT experienced during its final moments.

SUBSEQUENT ACTION

5. Studies have been initiated into aircraft self-damage during air-to-air gunnery and into a possible redesign of the banner spreader bar wheel.

CLAIMS

6. Claims have been received in respect of damage to vines. These have yet to be settled.

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