



MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

3/90

5 March 1990

ACCIDENT TO ROYAL AIR FORCE PHANTOM XV437

Date: 18 October 1988
Parent Airfield: RAF Wildenrath
Place of Accident: 40nm East of Gutersloh
Crew: Two
Casualties: Two Major

CIRCUMSTANCES

1. On 18 Oct 88, the crew of XV437 took-off as the number 2 of a pair of Phantoms for an interception sortie against the Ground Attack aircraft of their Tactical Leadership Programme course. The weather in the operating area was 8/8 strato cumulus, with tops at 3,000 ft and unlimited visibility above.
2. After carrying out several intercepts without incident, the crew of XV437 commenced a rejoin with their element leader. Whilst in a turn to the right at about 3,500ft AMSL and 280kts, they became aware of noise, vibration and rumbling. The pilot rolled wings level, retarded both engines slightly to 85% RPM, began a climb and noticed the right engine Turbine Gas Temperature (TGT) was at 1000°C. He diagnosed a surge on the right engine and transmitted a PAN call saying that he was shutting it down. As he retarded the right throttle, he noticed the left engine RPM was already decreasing. He was then asked to repeat his last transmission, and this he did while attempting to increase thrust by opening the right throttle to the engine temperature limit of 700° TGT, but with the engine still in a surged condition there was insufficient power to sustain level flight. He noticed the left RPM drop through 25% and reported that he had lost both engines. During this period the aircraft reached a height of 4,100ft and a minimum speed of 200kts. The pilot then retarded the left throttle to just above the idle stop and selected the left Gas Turbine Starter (GTS) switch to ON, but it failed to hold on. The aircraft was now descending through 3,500ft at a speed of 210kts and the AWACS aircraft advised the pilot to squawk emergency. The navigator heard an engine winding up and shortly afterwards, XV437 entered cloud. The pilot on seeing that he was at 210kts and, from the radio altimeter, that he was only 2,000ft above the ground, assessed that he had insufficient height to recover the aircraft and ejected; he was

quickly followed by the navigator. The aircraft crashed in a wooded gully at 285kts, wings level and with a nose down attitude of 45°.

CAUSE

3. The cause of the right engine failure could not be positively determined but it was probably the result of either a temperature sensing fault or a failure of an LP compressor rotor blade. Examination of the left engine found no evidence of mechanical failure; indeed, the engine appeared to have been running normally at about 70% at impact. Therefore, it is believed that the sequence of events surrounding the accident are as follows. The crew became alarmed by the initial vibration and rumbling and the pilot appears to have taken action before he had fully diagnosed the problem. In his haste to close down the right engine, he probably inadvertently shut the left one down because he was confused by the conflicting engine indications and the distracting radio calls. However, it is likely that training quickly took over and he instinctively pressed the left relight button and achieved a 'hot relight' on that engine; therefore, the GTs start attempted later was unnecessary. Unfortunately, the left engine had not 'wound up' sufficiently by the time the aircraft entered cloud and the pilot, believing he was without sufficient power, speed and height for safe recovery, made the right decision by ejecting.

CLAIMS

4. Claims have been settled totalling some DM 30,300 in respect of damage caused by this accident.



MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

6/90

March 29, 1990

AIRCRAFT ACCIDENT TO ROYAL AIR FORCE PHANTOM FGR2 XT908

Date:	9 January 1989
Parent Airfield:	RAF Leuchars
Place of Accident:	50nm east of Leuchars
Crew:	Two
Casualties	One Fatal

CIRCUMSTANCES

1. On 9 Jan 89, Phantom FGR2 XT908 was taking part in a training sortie, which included practice radar interceptions with another Phantom aircraft. Following a successful intercept, the 2 aircraft positioned for a second one. In the climb to 10,000 ft, and at a position some 80 nautical miles from base, the pilot of XT908 suddenly informed his navigator that he was feeling unwell and would have to return to base.
2. The pilot immediately transmitted an emergency call declaring that he had a "pilot problem" and initiated a turn towards base. He reported to his navigator that he was beginning to lose his vision and was feeling numb.
3. With the assistance of the navigator, who gave verbal attitude and heading instructions, and with the other aircraft alongside, the pilot was able to maintain straight and level flight. However, the pilot then reported further difficulty with his vision and although he responded, in a normal voice, to directions with a simple "yes", his follow-up actions were slow. Then, with the pilot still acknowledging the calls from both the other aircraft and his navigator, the Phantom began to descend with no corrective action being taken. When the navigator called "pull-up" with some urgency, the pilot applied full power and raised the nose of the aircraft smoothly. The aircraft attitude then stabilised, wings level, nose up, but with the speed decaying. Despite calls to lower the nose, the pilot only responded with a hesitant reply and at approximately 9,000 ft the aircraft departed from controlled flight and descended rapidly.
4. From the moment of the departure from controlled flight, the pilot failed to respond to all the calls from his navigator or the crew of the other aircraft and, as the Phantom descended through 4,000 ft, the navigator ejected after informing the pilot of his intentions. The aircraft crashed into the sea and was totally destroyed; the pilot did not eject and was killed.

CAUSE

5. Prior to the sortie, the pilot was reported to be behaving quite normally and in good health. Throughout the first part of the sortie, he appeared perfectly normal and responded to all his navigator's calls. From the moment of the pilot reporting that he was unwell to the point the aircraft crashed, the eye witness accounts of his navigator and the crew of the other aircraft, coupled with a recording of the radio calls, indicated that the cause of the accident to Phantom XT908 was loss of control due to incapacitation of the pilot. The most likely causes of the incapacitation were considered to be heart attack, cardiac arrhythmia (irregular heartbeats) or migraine.

6. Despite a thorough investigation, it was not possible to identify positively the cause of the incapacitation, but the balance of medical opinion, on the evidence available, suggested that the most probable cause was a severe migraine attack.

SUBSEQUENT ACTIONS

7. The requirements for medical assessment of aircrew are being reviewed.