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Department for Transport

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# AAIB Bulletin S2/2008

## *SPECIAL*

### ACCIDENT

<b>Aircraft Type and Registration:</b>	Cessna Citation 500, VP-BGE
<b>No &amp; Type of Engines:</b>	2 x Pratt & Whitney (Canada) JT15D-1A turbfans
<b>Year of Manufacture:</b>	1975
<b>Date &amp; Time (UTC):</b>	30 March 2008 at 1338 hrs
<b>Location:</b>	Romsey Close, Farnborough, Kent
<b>Persons on Board:</b>	Crew - 2                      Passengers - 3
<b>Injuries:</b>	Crew - 2 (Fatal)              Passengers - 3 (Fatal)
<b>Nature of Damage:</b>	Aircraft destroyed
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence
<b>Commander's Age:</b>	57 years
<b>Commander's Flying Experience:</b>	8,280 hours (of which 32 were on type) Last 90 days - 44 hours Last 28 days - 20 hours
<b>Information Source:</b>	AAIB Field Investigation All times in this report are UTC

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This bulletin contains facts which have been determined up to the time of issue. This information is published to inform the aviation industry and the public of the general circumstances of accidents and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

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## The investigation

The Air Accidents Investigation Branch was informed of the accident at 1350 hrs on 30 March 2008 and the investigation commenced early the same evening. The Chief Inspector of Air Accidents has ordered an Inspector's Investigation to be conducted into the circumstances of this accident under the provisions of the *Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 1996*. This is a preliminary report detailing the facts of the accident; no analysis has been attempted.

In accordance with established international arrangements, the National Transportation Safety Board (NTSB) of the USA representing the State of Design and Manufacture of the aircraft, has appointed an Accredited Representative to participate fully in the investigation. The NTSB Accredited Representative is supported by a team which includes additional investigators from the NTSB, Federal Aviation Administration and Cessna; Pratt and Whitney (Canada) are also participating fully in the investigation supporting an Accredited Representative from the Transportation Safety Board of Canada.

## History of the flight

The aircraft was engaged on a flight from Biggin Hill, Kent to Pau, France with two crew and three passengers on board. Some doubt currently exists as to the status of each pilot, so for the purpose of this report, the pilot sitting in the left seat is referred to as the commander. The commander called for start at 1317 hrs and, at 1320 hrs, was cleared to taxi to holding point A1 for a departure from Runway 21. No one has been identified who witnessed the aircraft's start or subsequent taxi to the holding point.

At 1324 hrs, ATC instructed the crew to hold at A1 and cleared them for a LYDD 2 departure adding:

'WHEN AIRBORNE IT'S A RIGHT TURN DETLING ROUTE THROUGH THE BIGGIN OVERHEAD MAINTAIN ALTITUDE TWO THOUSAND FOUR HUNDRED SQUAWK SIX THREE FIVE TWO'.

The clearance was correctly read back and the aircraft was cleared for takeoff from Runway 21 at 1332 hrs and was observed by the tower controller who stated that 'everything appeared normal'. At 1334 hrs, one minute after becoming airborne, the co-pilot transmitted:

'AND VICTOR PAPA BRAVO GOLF ECHO ER WE'RE MAKING AN IMMEDIATE TURN TO RETURN TO THE AIRPORT IMMEDIATE TURN TO THE AIRPORT.'

The tower controller replied:

'VICTOR GOLF ECHO JOIN DOWNWIND RIGHT-HAND RUNWAY TWO ONE, THE BIGGIN QNH ONE THOUSAND, THRESHOLD ELEVATION'S FIVE ONE SEVEN FEET, WHAT'S THE NATURE OF YOUR PROBLEM?'

The co-pilot transmitted:

'ERE WE DON'T KNOW SIR WE'RE GETTING ER ENGINE VIBRATION WE'LL COME STRAIGHT BACK.'

The aircraft then manoeuvred to overhead the airfield at approximately 1,200 ft aal heading towards the end of the downwind leg for a left-hand circuit to Runway 21. As the aircraft left the overhead it commenced a continuous descent and, at 1336 hrs, the co-pilot transmitted:

‘AND ER VICTOR GOLF ECHO WE HAVE MAJOR PROBLEM A MAJOR POWER PROBLEM IT LOOKS AS THOUGH WE’RE ER GOING IN WE’RE GOING IN!’

No further radio transmissions from the aircraft were received.

Numerous witnesses reported seeing the aircraft flying low over a built up area, passing over playing fields and houses about 2 nm north-north-east of Biggin Hill Airport. The aircraft was seen to be maintaining a normal flying attitude and some witnesses reported that the landing gear was up and others that it was down. Some described seeing it adopt a nose-high attitude and to bank away from houses just before it crashed. Some witnesses stated that there was no engine noise but others stated that they only became aware of the aircraft, as it flew low overhead, because of ‘the loud noise it was making, as if the engines were at high power’.

The aircraft flew extremely low over the roofs of several houses before its left wing impacted the roof of a house at the end of a residential close adjacent to a small wood. After the initial impact the aircraft struck the ground and caught fire destroying the attached garage of a neighbouring dwelling. All persons on board received fatal injuries.

A search of the Southern Apron, Taxiway ‘A’, Runway 21 and the area immediately beyond the end of Runway 21 at Biggin Hill was conducted after the accident. No debris from the aircraft or foreign objects were found which could have contributed to the accident.

### **Technical investigation**

The wreckage was substantially consumed in the subsequent fire and the aircraft was not, nor required to be, equipped with any Flight Recorders (Flight Data or Cockpit Voice Recorders).

Examination of the wreckage, however, did not reveal any evidence of pre-impact restrictions in the flight control circuits and examination of the engines, after disassembly, revealed no evidence of either engine having suffered a bird strike or foreign object damage. Furthermore, no pre-impact damage or failures were found in any of the rotating assemblies or main bearings.

The investigation is continuing and a final report will be published by the AAIB in due course.