Pitts S-1C, G-BUTO, 8 April 1997

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Aircraft Type and Registration:	Pitts S-1C, G-BUTO
No & Type of Engines:	1 Lycoming O-320-A piston engine
Year of Manufacture:	1972
Date & Time (UTC):	8 April 1997 at 1440 hrs
Location:	2nm South East of Barton-Under-Needwood, Staffordshire
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - None
Injuries:	Crew - None - Passengers - N/A
Nature of Damage:	Aircraft destroyed
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	55 years
Commander's Flying Experience:	10,036 hours (of which 95 hours were on type) Last 90 days -107 hours Last 28 days - 38 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and telephone enquiries by the AAIB

The pilot had been airborne for just over an hour and had completedtwo aerobatics sequences; this was in preparation for a forthcomingcompetition. The weather was excellent and the wind was lightand from the south at the pilot's operating height of 2,500 feetto 4,000 feet amsl. Prior to his third practice, the pilot changedhis location out of consideration to people on the ground; thisnew location was over ground which was approximately 200 feetamsl.

The aerobatics sequence went as planned until the top of a stallturn. The airspeed was slightly low as the pilot applied fullleft rudder. He was attempting to complete the manoeuvre on aspecific heading and can remember advancing the throttle slightlyand applying full forward control column. Almost immediately,the aircraft flicked into an inverted spin. The pilot was surprisedat the high rate of descent and cannot recall his precise recoveryactions He can remember that the throttle was fully retardedand that he brought the control column fully back but with theailerons central. With

full left rudder still applied, the aircraftwas not recovering and the pilot thinks that he may then haverelaxed his rudder application or even applied some right rudder;he did not check the turn direction from the 'Turn and Slip' indicator. However, he noted the altimeter indicating 2,000 feet amsl. As this was his self briefed abandonment height, he immediatelywent for his harness release and bailed out of the aircraft; hewas aware of being thrown forcibly out of the cockpit as he releasedhis harness. The parachute descent was uneventful and the pilotlanded a few hundred yards from where G-BUTO had crashed.

Several eye witnesses saw the last few moments of flight and theparachute descent. They saw the aircraft do two vertical loopingmanoeuvres before going into a vertical climb. It was then seento move erratically from side to side before turning over nosedown and spiral towards the ground. The pilot was seen to leavethe aircraft and his parachute opened almost immediately.

The pilot had made weight and balance calculations prior to flightand, subsequent to the accident, he rechecked the figures andconfirmed that the weight and centre of gravity of the aircraftwere within the correct limits. He also stated that the aircrafthad been fully serviceable during the flight and acknowledgedthat it was a mishandled stall turn that caused the loss of control. With the short time between this loss of control and his decisionto bail out of G-BUTO, the pilot cannot be certain of his recoveryactions; he considers that he may have used some incorrect actions. He has had reasonable experience in aerobatics and has completedtraining in both upright and inverted spinning but was surprisedat how quickly the aircraft entered the spin and the extent ofhis disorientation.

The pilot acknowledged the value of his habit of wearing a parachuteduring aerobatics flights and of his pre-planned abandonment height.