

# Pitts S-2A, G-BTUL, 26 October 1996

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<b>Aircraft Type and Registration:</b>	Pitts S-2A, G-BTUL
<b>No &amp; Type of Engines:</b>	1 Lycoming AEIO-360-A1A piston engine
<b>Year of Manufacture:</b>	1979
<b>Date &amp; Time (UTC):</b>	26 October 1996 at 1415 hrs
<b>Location:</b>	Frampton Marsh, 5 miles SE of Boston, Lincs
<b>Type of Flight:</b>	Private
<b>Persons on Board:</b>	Crew - 1 - Passengers 1
<b>Injuries:</b>	Crew - None - Passengers - None
<b>Nature of Damage:</b>	Left lower aileron partly detached
<b>Commander's Licence:</b>	Basic Commercial Pilot's Licence with IMC and Night Ratings
<b>Commander's Age:</b>	47 years
<b>Commander's Flying Experience:</b>	1,642 hours (of which 400 were on type) Last 90 days - 30 hours Last 28 days - 8 hours
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot and additional AAIB inquiries

The purpose of the flight was the aerial inspection of a farmer's field in connection with an intended landing strip. On climbing away from the field some 600 to 700 ft, the pilot felt the control column 'snatch' to the right and 'go rigid'. She looked out of the cockpit and saw that the left lower aileron had become partly detached so that the outboard end was 'hanging down' into the airflow. She also noted that there was a large field of stubble on the left for which the aircraft was already in the downwind position. Using full rudder, she was able to turn the aircraft towards this field. However another snatch on the control column occurred as the aircraft completed the turn, following which it was not possible to achieve any left bank. This caused problems in coping with the crosswind component, which was from the left, however the landing was achieved without damaging the aircraft.

It was found that the outboard hinge bolt from the lower left aileron was missing. This had caused the aileron to droop in a manner that impeded the movement of both the operating rod and the link rod that attached to the upper aileron, with the result that the entire lateral control system was restricted. Each hinge is formed by a bolt which is inserted both through an eye end attachment located in the wing and a fork-end in the aileron leading edge. Each bolt was retained by a stiff-nut. Clearly, for the outer hinge bolt to detach the associated nut had to be missing at that stage.

Several months prior to this accident the aircraft had undergone extensive maintenance, including recovering of the fabric. However the work was apparently unsatisfactory in several areas, with a list of associated defects having been compiled following a CAA survey. This resulted in the maintenance company being investigated by the CAA Licensing Department. The aircraft was then given to another maintenance organisation for the defects to be rectified. Shortly after the aircraft was returned to service, the tail wheel fell off, and one of the main landing gear wheel spats detached in flight. However, although these incidents were attributed to the poor workmanship of the first maintenance company, a commercial dispute arose between the pilot (who is a joint owner of the aircraft) and the second company. At the beginning of September 1996, the latter organisation removed the lower left aileron for repainting. It was subsequently reinstalled and a duplicate inspection carried out. This was approximately nine flying hours before the accident.

The CAA's Enforcement Branch and the Chief Surveyor's Office are conducting an investigation.