

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Denney Kitfox Mk2 Kitfox, G-KAWA	
<b>No &amp; Type of Engines:</b>	1 Rotax 582 piston engine	
<b>Year of Manufacture:</b>	1994	
<b>Date &amp; Time (UTC):</b>	8 September 2007 at 1730 hrs	
<b>Location:</b>	Holmbeck Farm, near Wing, Aylesbury, Bucks	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - 1 (Minor)	Passengers - N/A
<b>Nature of Damage:</b>	Minor damage to left wing, fuselage badly distorted with bent and broken free tubes, landing gear collapsed, propeller and tailwheel broken	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	57 years	
<b>Commander's Flying Experience:</b>	713 hours (of which 22 were on type) Last 90 days - 3:05 hours Last 28 days - 0:45 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

**Synopsis**

As the aircraft landed in a light crosswind from the right, the pilot could not level the wings as he began the flare. Use of rudder in an attempt to do so resulted in the aircraft 'crabbing' and drifting towards some hay bales on the left side of the runway. The engine responded to the application of full power but failed to climb away and the left wing struck a bale. A broken link in the aileron circuit was found after the accident, but was assessed to have resulted from overload.

**History of the flight**

On completion of a local flight to evaluate the aircraft prior to an impending inspection for the renewal of its permit to fly, the pilot set up an approach to Runway 33

at Holmbeck Farm. This runway is normally used as an emergency runway. The flight had included an assessment of the aircraft's general handling throughout the speed range, as well as stalls, with and without flap. The wind was 340°/07 kt, and the approach proceeded normally. However, the pilot decided not to land on Runway 33 and, after carrying out an uneventful go-around, flew a normal circuit for a flapless landing on Runway 29. This requires a 'dog-leg' turn to the left to line up for a short final approach.

The approach to Runway 29 was flown at 60 mph, and the pilot reported that everything felt normal until shortly before the flare, at which point he considered the

ailerons felt 'slightly mushy'. As he started to flare the aircraft, it rolled gently left. He tried to level the wings with aileron, but was unable to do so, and the stick 'felt very light'. He did succeed in levelling the wings using rudder, but finished up crabbing sideways across the ground towards some hay bales. The pilot applied full power, intending to go around, but although the engine responded, the aircraft failed to climb. Consequently, the left wing struck one of the hay bales, yawing the aircraft violently left, as it slid across the runway intersection. It came to rest just beyond the intersection facing in the opposite direction. The pilot was able to exit the aircraft via the left cabin door, having suffered minor injuries.

#### **Aircraft examination**

Upon dismantling the aircraft, the pilot noticed that a 'ball-link' rod-end connector in the aileron circuit at the base of the control column was broken, and that the fracture surfaces were dark in colour. This raised a question in his mind as to whether the fracture might have occurred prior to the impact. He also commented

that, after the accident, the ailerons were 'jammed left up/right down', and believed that if they had been in this condition prior to touchdown, they could apparently offer an explanation for the aircraft's abnormal behaviour.

Detailed examination of the failed component by the AAIB showed that it had fractured through the threaded section of the fitting, adjacent to the backing nut, as a result of bending instability caused by a compression overload. The dark colour of the fracture was due to the granular nature of the surface, and was of no particular significance. The fracture faces displayed no evidence of fatigue or any other form of progressive failure. Gross plastic deformation of the fitting adjacent to the fracture, extending over much of the exposed threaded section, confirmed that the component was not in a weakened state when fracture occurred. Whilst it was not possible to determine when the overload fracture occurred, the characteristics of the failure were typical of accident-induced damage seen on this type of component.