

ACCIDENT

Aircraft Type and Registration:	Rand KR-2, G-BOUN	
No & Type of Engines:	1 Volkswagen 1834 piston engine	
Year of Manufacture:	1990	
Date & Time (UTC):	28 March 2007 at 1730 hrs	
Location:	Horse Leys Farm, Burton on the Wolds, Leicestershire	
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:	Private Pilot's Licence	
Commander's Age:	48 years	
Commander's Flying Experience:	1,522 hours (of which 400 were on type) Last 90 days - 14 hours Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and AAIB enquiries	

Synopsis

One of the propeller blades detached from the hub following a touch-and-go landing. During the subsequent forced landing the aircraft struck a hedge and was severely damaged.

History of the flight

The pilot stated that on the climb out, after a touch-and-go landing and at height of 100 ft to 150 ft, the engine developed what he described as "major" vibration and then stopped. He made a forced landing in a field, as a result of which the aircraft struck a hedge and turned over on to its back.

The pilot believed that the accident was caused by the

failure of a propeller blade as a result of a bird strike, spinner failure, or foreign object damage. However, the pilot does not recall seeing any birds just prior to the accident or any evidence of bird remains on the aircraft.

Following the accident the pilot said that he was told by the police that he could move the aircraft and do whatever he wished with the wreckage. Based on this advice, and before the Aircraft Accident Report Form was returned to the AAIB, the pilot burnt and disposed of the damaged propeller blade and other damaged parts of the aircraft. He also informed the AAIB that the broken spinner had been stolen. The pilot did not

take any photographs of the damaged parts before he disposed of them.

Police video

A video of the accident site, taken from a police helicopter, was provided to the AAIB.

The crash site was next to a hedge which separated two large fields that appeared to have been recently harrowed. The aircraft, which was badly damaged, was upside down with the left wing detached. The engine and structure forward of the cockpit had broken away from the aircraft and a number of large pieces of wreckage had been thrown some considerable distance from the aircraft. There was also wreckage, including a wheel spat, embedded in the hedge; a number of the thick branches of the hedge had been recently snapped and some of the hedge had been pulled out of the ground. From the video there was no evidence of any wheel tracks from the aircraft in the soil on either side of the hedge; however wheel tracks, made by two vehicles parked close to the aircraft, could be clearly seen in the soil.

The video also focused on two large pieces of structure approximately two fields before the crash site: these pieces of structure, coloured white, did not resemble parts of the propeller spinner. As the tail section and wings could be clearly identified in the video taken at the crash site, it is concluded that the two pieces of structure must have come from the cockpit or nose area of the aircraft.

Witness observation

A witness at the airfield observed the touch-and-go landing and remarked that the aircraft touched down more firmly than normal, but did not appear to be a heavy landing. As the aircraft reached a height of

150 ft to 200 ft the witness saw a black and roughly rectangular object, about the size of his forearm, detach from the aircraft and fall into a field of oilseed rape. The engine then stopped and the aircraft started a gentle turn to the left and disappeared from view.

Another witness who arrived at the crash site shortly after the accident reported that the aircraft had struck the hedge and the fuel tank and engine had been thrown forward by approximately 20 m and 40 m respectively. One of the propeller blades had broken off close to the blade root and the second was still connected to the hub. The rear face of the propeller blade was painted black.

AAIB comment

The Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 1996 states:

'...neither the aircraft nor its contents shall, except under the authority of the Secretary of State, be removed or otherwise interfered with.'
(Regulation 7-1).

In General Aviation accidents where there are no fatalities, the AAIB, acting under the authority of the Secretary of State, normally gives permission to remove the wreckage to a secure location and requires the commander to preserve the evidence and to submit a written account of the accident on an Aircraft Accident Report Form (AARF). Based on this information the AAIB decide what, if any, follow up action to take. With the damaged parts destroyed, spinner stolen and no detailed photographs of the damaged propeller, the AAIB was unable to determine positively the cause of this accident or make Safety Recommendations to prevent a recurrence.

Nevertheless, from the information available it is likely that, following the touch-and-go landing, one of the propeller blades detached from the hub, damaging part of the forward structure, which then fell away from the aircraft. The engine stopped and as the aircraft approached the chosen landing site it hit a hedge that ran across the threshold of the field. The lack of bird

remains makes it unlikely that the aircraft suffered a bird strike. The witness did not see the spinner fall from the aircraft, so it is unlikely that the failure of the spinner was the initiating factor. Therefore, either the propeller blade struck the ground during the touch-and-go landing, or it failed for some other reason which cannot be determined.