

ACCIDENT

Aircraft Type and Registration:	Van's RV-9A, G-CCZT	
No & Type of Engines:	1 Lycoming O-320-E2A piston engine	
Year of Manufacture:	2004	
Date & Time (UTC):	16 April 2006 at 1525 hrs	
Location:	Bicester Airfield, Oxfordshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to the nose landing gear, propeller and the engine area	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	62 years	
Commander's Flying Experience:	137 hours (of which 45 were on type) Last 90 days - 1 hour Last 28 days - 1 hour	
Information Source:	AAIB field investigation	

Synopsis

Whilst initiating the landing flare the dual cockpit control stick became disconnected from the flying control system and the aircraft pitched nose down. It impacted the grass runway damaging the nose landing gear, propeller and engine mountings and cowling.

History of the flight

The aircraft was being handled by the 'passenger' (who also held a Private Pilot's Licence and had nearly completed construction of his own Van's RV-9A) from the right-hand seat. After a normal approach and finals, which were flown at approximately 65 kt, he started to flare the aircraft when the control stick became disconnected from the flying control system. The

aircraft, which was trimmed for the approach, pitched to a nose-down attitude. The nose landing gear struck the ground causing it to collapse and dig into the surface of the grass airfield. This allowed the propeller to strike the ground and the aircraft to pitch forward onto its nose. The aircraft stopped abruptly and then fell backwards onto its main landing gears. Both occupants evacuated the aircraft with no injuries.

Engineering investigation

The right-hand control stick, also known as the dual control stick, was attached to the flying control system by the lower section of the tubular stick sliding into the inside of a tube (protruding upwards from the forward seat

area) connected to the flying control system (Figure 1). The control stick was held into the protruding tube by the friction associated with the ‘push fit’ between the two tubes. There was no positive secure connection, such as, for example, a bolt between the control stick and the tube of the flying control system.

The aircraft manufacturer’s drawings did not specify any positive secure connection between the dual control stick and the aircraft’s flying control system.

Safety action taken

The Popular Flying Association (PFA) is the organisation authorised to oversee homebuilt aircraft in the UK, covering design assessment, build standard, recommendation for the issue of the Permit to Fly and continued airworthiness. The PFA issued mandatory airworthiness information MOD/320/002 on

19 May 2006 requiring a nut and bolt to be installed at the junction of the dual control stick and the aircraft’s flying control system on all Van’s RV-9/9A aircraft. During the PFA’s research they found that the Van’s RV-7/7A aircraft had a similar arrangement for the attachment of the dual control stick as that of the RV-9/9A. On 19 May 2006 the PFA issued mandatory airworthiness information MOD/323/001 requiring a nut and bolt to be installed at the junction of the dual control stick and the aircraft’s flying control system on all Van’s RV-7/7A aircraft.

The PFA has added a note regarding this accident and the mandatory airworthiness information in the Van’s aircraft incidents and defects section of SPARS, which is the ‘NoteS to PFA AircRaft InSpectors’. The PFA has also issued a PFA Safety Alert regarding the security of control columns in all PFA aircraft which will be published in the PFA magazine.

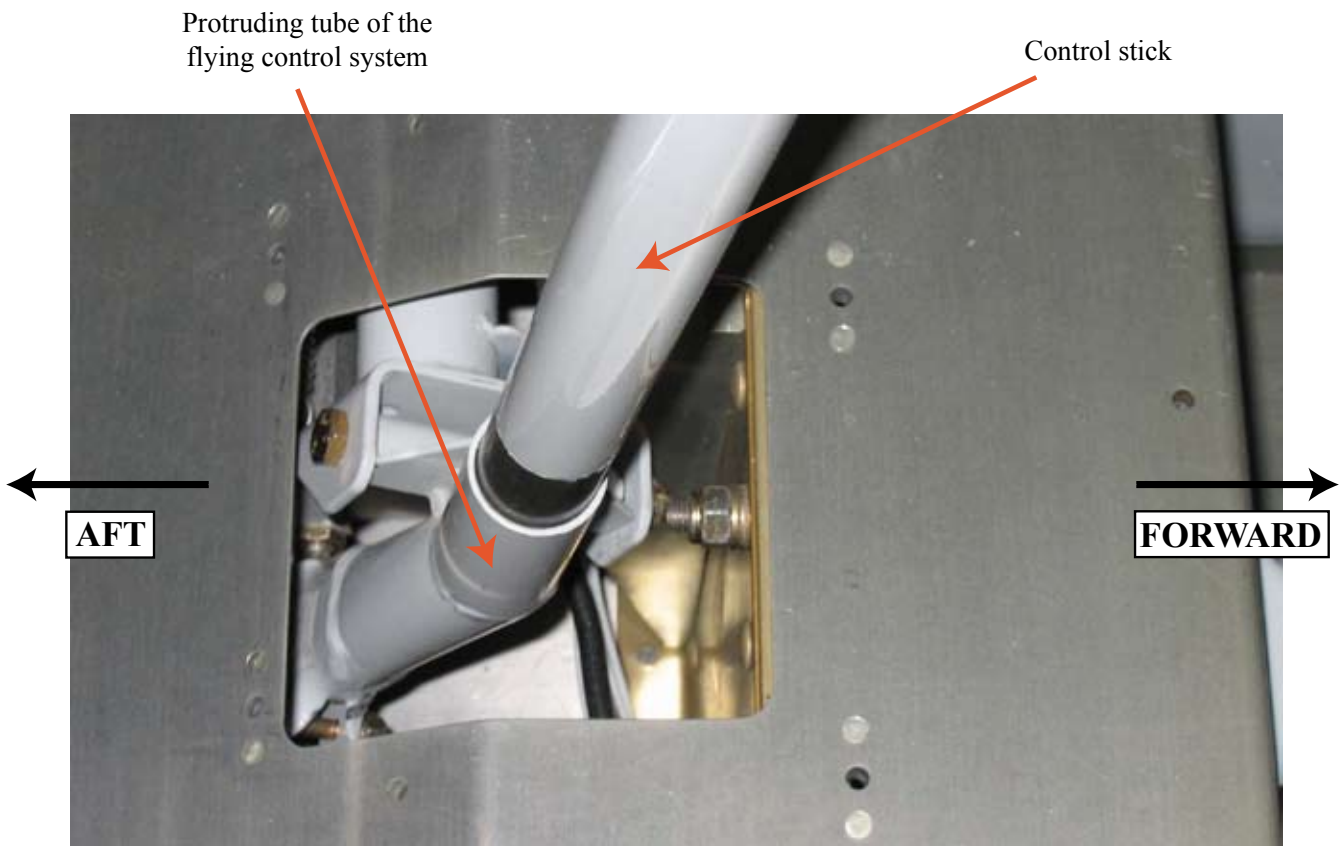


Figure 1

Safety Recommendations**Safety Recommendation 2006-110**

It is recommended to Van's Aircraft, the producer of the drawings and aircraft kits, that they modify their drawings for the RV-7, -7A, -9 and -9A models to introduce a positive attachment of the dual cockpit control stick to the aircraft's flying control system.

Safety Recommendation 2006-111

It is recommended to Van's Aircraft, the producer of the drawings and aircraft kits, that they issue a Service Bulletin recommending to all owners of RV-7, -7A, -9 and -9A aircraft that they positively attach the dual control stick to the aircraft's flying control system.