

Cessna 172, SE-IYF

AAIB Bulletin No: 12/2004	Ref: EW/G2004/07/02	Category: 1.3
Aircraft Type and Registration:	Cessna 172, SE-IYF	
No & Type of Engines:	1 Lycoming O-320 piston engine	
Year of Manufacture:	1973	
Date & Time (UTC):	4 July 2004 at 1400 hrs	
Location:	Lundy Island, Bristol Channel, North Devon	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - 1 (Minor)	Passengers - N/A
Nature of Damage:	Aircraft destroyed	
Commander's Licence:	Private Pilot's Licence with Night Rating	
Commander's Age:	46 years	
Commander's Flying Experience:	660 hours (of which at least 200 were on type)	
	Last 90 days - 45 hours	
	Last 28 days - 16 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and enquiries by the AAIB	

Synopsis

On takeoff, the aircraft was seen to be heading to the left of the strip centre-line and then pitching nose-up before stalling and crashing. Rapid and effective action by three witnesses resulted in the unconscious pilot being recovered from the aircraft, which was on fire.

This was the second of two accidents to occur at the strip on the same day. The first, involving Vans RV-4, G-BZPH was also subject to an AAIB investigation.

Airfield description

Lundy Island is approximately 5 km long by 1 km wide and is aligned almost north/south. The landing strip is situated on top of a plateau at an altitude of 400 feet amsl. The grass strip is approximately 400 metres in length and is designated north-east/south-west. A check by the airstrip operator subsequently confirmed that the runway orientation was 050°/230°M. At the time of the

accident, the strip had white stones marking the edges of the runway for the western 200 metres. The eastern 200 metres were not marked at the time of the accident but the edges have now been marked with white stones. The strip rises from both ends to an apex approximately at its centre; at the end of the strip, a pilot in an aircraft would not be able to see the other end. To the south of the runway, abeam the highest point, there is a rudimentary windsock at the top of a 12 feet high pole. There is a small outcrop of rocks to the north of the runway, which can cause turbulence with a northerly surface wind. A lighthouse located to the south of the airstrip can be clearly seen and is a useful aid for orientation. Commercial flight guides warn of the hazards from birds and livestock as well as the surface condition, which is variously described as '*rough*', '*quite rough*' and '*rough with rabbit holes and rocks*'.

History of the flight

The pilot had flown into Lundy Island on the morning of 4 July; he had flown from the airstrip on one previous occasion. The weather was good with a north-westerly surface wind. At the time of the accident, the pilot estimated the surface wind as 10 to 15 kt.

The pilot reported that he taxied along the runway to the most easterly end and turned through 180° in preparation for takeoff. From this position, he could see the top of the windsock pole and was confident that he was aligned along the runway. On takeoff, he became airborne earlier than he expected although he could not recollect the precise airspeed. Due to the crosswind, the aircraft drifted to the left and the pilot was aware that he was heading directly for some parked aircraft and people. He tried to use the available airspeed to climb but the airspeed decayed rapidly and he could not recover from the nose high attitude. The aircraft stalled and entered a "spin" to the left before impacting the ground.

Numerous witnesses saw the accident. Other pilots were standing to the south of the runway when they heard the sound of an aircraft on takeoff. All these witnesses confirmed that the engine noise remained at a constant level until impact. Their estimate of the surface wind was that it was between 5 and 15 kt, and from a north-westerly to a northerly direction. From their location, they did not see the initial take-off run. However, when the aircraft appeared, it was just airborne with the wings level and was heading directly for the windsock and the parked aircraft. One other witness saw the aircraft line-up and considered that it appeared to be aligned with the strip. Another witness reported that he was standing by the windsock and that he saw the aircraft heading directly for him at an estimated six feet agl. All the witnesses saw the aircraft nose suddenly pitch-up from an apparently normal take-off attitude. The aircraft reached an estimated 50 to 100 feet agl before it seemed to stall to the left and impact the ground left wing first.

Three of the witnesses ran towards the crashed aircraft. They went to both sides of the cockpit and found the pilot unconscious in the left cockpit seat. One of the two rescuers on the right side was a medical doctor and he was mindful of the need to minimise movements in case of further injury. However, after releasing the pilot's harness, the rescuers became aware of a fire starting at the left side of the aircraft. Their priority was then to evacuate the pilot and this they did successfully even though there was an explosion from the area of the left fuel tank as they moved away. Once clear of the aircraft, the doctor and another witness, who was a nurse, attended to the pilot. Other bystanders used a local fire bowser to extinguish the flames.

Conclusion

Most external observers considered that the aircraft might not have been aligned with the strip during takeoff, although the pilot was confident that he was aligned correctly. The lack of markings at the time of the accident would have made it difficult to assess an accurate line-up. Following the accident, additional markings have been installed. Rapid and effective actions by three witnesses prevented the pilot from sustaining possible serious injuries.