

Robin R2120U, G-BZYZ

AAIB Bulletin No: 4/2003	Ref: EW/G2002/07/19	Category: 1.3
Aircraft Type and Registration:	Robin R2120U, G-BZYZ	
No & Type of Engines:	1 Lycoming O-235-L2A piston engine	
Year of Manufacture:	2001	
Date & Time (UTC):	16 July 2002 at 1050 hrs	
Location:	White Waltham Airfield, Berkshire	
Type of Flight:	Training	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - Minor	Passengers - N/A
Nature of Damage:	Damaged beyond economic repair	
Commander's Licence:	Private Pilots Licence	
Commander's Age:	62 years	
Commander's Flying Experience:	100 hours (of which 2 were on type)	
	Last 90 days - 11 hours	
	Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

History of the flight

This was the pilots first solo circuit flight for his conversion to type. The reported meteorological conditions gave a surface wind of 350°/05 kt, visibility 6 km in haze with the lowest cloud at 1,500 feet, the temperature of +23°C and the dewpoint of +16°C. Runway 07 was the runway in use and its grass surface was dry. The pilot was unfamiliar with this runway and its circuit pattern, which requires a left turn through 60° shortly after take off in order to avoid flying over houses.

On the third circuit the pilot carried out a touch and go landing. During the subsequent takeoff he felt that the engine was not producing its normal power although he could not identify any indications that supported this feeling. Rotation was commenced at the correct speed but the stall warning horn sounded as soon as the aircraft became airborne. The pilot lowered the nose but the climb performance was still sluggish. As he approached the end of the runway he commenced the

left turn even though the stall warning was still activated. The aircraft entered a stall, at a height of approximately 50 feet, descended rapidly and struck the ground. Just prior to the stall the aircraft was seen by witnesses to be in a high nose attitude.

The airfield fire and rescue services arrived promptly. They were unable to remove the canopy from the outside and assisted the pilot to exit the aircraft through the damaged canopy.

The pilot later acknowledged that he had left the carburettor heat control in the ON position thus reducing the maximum power available from the engine. He assessed the cause of the accident as being his lack of familiarity with both the circuit and the aircraft. He had entered a climbing turn with reduced power available and the stall warning activated. The hazy conditions may have reduced his awareness of the aircraft pitch attitude and led to the observed high nose attitude.

Fire extinguisher restraint

A hand held fire extinguisher, restrained by spring clips, had been attached to the rear bulkhead. Deceleration during ground impact released the fire extinguisher allowing it to fly forwards and through the canopy, just missing the pilots head. Figure 1 (*jpg 82kb*) shows the fitting and the hole in the canopy. (The fire extinguisher had been retrieved and placed adjacent to the fitting for photographic purposes).

The aircraft was originally certificated by the French Civil Aviation Authority (DGAC) under Federal Aviation Requirements (FARs). At that time FAR 23.561 required objects, such as the extinguisher, to be restrained to allow for a 9g longitudinal deceleration. Current Joint Aviation Requirements (JARs) call for restraint against an 18g deceleration. In this case the fitting allowed the extinguisher to become dislodged under low g loading and was clearly inadequate.

It was not possible to ascertain when the fire extinguisher and its mounting were fitted to the aircraft. It may have been installed by the manufacturer, although this appears to be unlikely. A fire extinguisher was booked out of the maintenance company's store at a time when preparation for the Certificate of Airworthiness (C of A) was in progress. It is therefore more likely to have been installed by the maintenance company as part of its preparation for the C of A.

There was no record in the aircraft logbook for the installation of a fire extinguisher being conducted in the UK and the CAA regional office had not approved a modification for such an installation onto this type of Robin aircraft. If the installation of the extinguisher had been recorded however it would have been brought to the attention of the CAA during its survey allowing them to determine compliance with applicable standards. As a result the CAA did not assess the fire extinguisher installation during its survey of the aircraft and the C of A was issued.

The pilot was fortunate that he narrowly avoided being struck by the loose extinguisher in the subsequent accident.