

**Aviation Safety Investigation Report
199702530**

**Skyfox Aviation Ltd
Gazelle**

01 August 1997

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 199702530 **Occurrence Type:** Accident
Location: Bishopsbourne
State: TAS **Inv Category:** 4
Date: Friday 01 August 1997
Time: 1348 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Skyfox Aviation Ltd
Aircraft Model: CA-25N
Aircraft Registration: VH-IDB **Serial Number:** CA25N062
Type of Operation: Instructional Solo
Damage to Aircraft: Substantial
Departure Point: Launceston Tas
Departure Time:
Destination: Launceston Tas

Crew Details:

Role	Class of Licence	Hours on	
		Type	Hours Total
Pilot-In-Command	Student	3.0	70

Approved for Release: Tuesday, May 19, 1998

The pilot reported that he was conducting a practice forced landing when the engine stopped. At 3,000 ft he had applied full carburettor heat, closed the throttle and commenced a glide descent. During the descent he applied power on four occasions to re-warm the engine. At about 600 ft AGL the engine stopped along with the geared wooden propeller. The pilot carried out trouble checks and declared a Mayday. He twice engaged the starter in an attempt to restart the engine but was unsuccessful. He subsequently reported that the starter seemed to be sluggish.

The aircraft touched down in a paddock on a downhill slope. It rolled about 30 metres, crashed through a farm fence, passed under a powerline, crossed a road, encountered a ditch and overturned.

At the time of the accident weather conditions were: CAVOK, outside temperature about 15 degrees Celsius, wind calm, visibility 10 km plus, nil precipitation.

This was the second accident to VH-IDB in the same area due to the engine stopping during practice forced landings. The previous accident occurred on 14 May 1997. Verbal reports of other instances have been received of Skyfox Gazelles experiencing engine stoppages after the throttle was closed and engine RPM reduced to idle.



After the first accident, the engine was inspected by a licensed aircraft maintenance engineer (LAME). Then, after the second accident with the same engine installed, it was inspected first by the LAME and then by the engine manufacturer's agent. No fault was found with the engine after each accident. Post accident tests on the starter, the battery and the engine have failed to detect a reason for the sluggish starter anomaly reported by the pilot.

Safety Action

As a result of complaints about the stalling of engines at idle, Airworthiness officers from the Civil Aviation Safety Authority (CASA), in conjunction with the aircraft manufacturer, conducted an investigation which included test flights in the Gazelle.

It was found that the throttle mechanism had enough free play (also known as backlash) to reduce RPM below idle and stop the engine. This could occur if extra force was applied when pulling the throttle back to idle speed. To address this problem, the aircraft manufacturer issued Service Bulletin (SB) No. 20 on 28 October 1997. This SB provides the following information: "Idle speed may inadvertently be reduced below set minimum due to incorrect throttle stop adjustment." SB 20 requires operators to check the idle setting and adjust for backlash at the throttle stop in the cockpit. Compliance was mandatory, within two weeks or 10 hours time in service from receipt of the SB.

