

# AIB Bulletin

# 4/85

No: 4/85

Ref: EW/G84/09/15

**Aircraft type and registration:** Grumman AA1B Yankee G-AYLO (light single engined fixed wing aircraft)

**Year of Manufacture:** 1970

**Date and time (GMT):** 23 September 1984 at 1225 hrs

**Location:** Cardiff (Rhoose) Airport

**Type of flight:** Private

**Persons on board:** Crew — 1                      Passengers — 1

**Injuries:** Crew — 1 (serious)      Passengers — 1 (serious)

**Nature of damage:** Aircraft destroyed

**Commander's Licence:** Private Pilot's Licence

**Commander's Age:** 38 years

**Commander's total flying experience:** 165 hours

**Information Source:** Aircraft Accident Report Form completed by pilot. Throttle cable examination by AIB.

The pilot was practising circuits on runway 30 at Cardiff (Rhoose) Airport, with a surface wind reported as 300°/16 to 28 kt. On the fourth circuit, during the crosswind turn, he heard a loud bang as though the engine had backfired.

The circuit was continued normally and power was reduced on final approach but as the throttle was advanced, at a height of thirty feet, the engine would not respond to the increased power demand and the pilot considered he had lost throttle control.

On touching the runway the engine went to full power, the aircraft veered some 30° to the left and despite attempts to lift the aircraft into a climbing attitude, it struck the fire service building positioned some 140 metres from the edge of the runway and about 900 metres from the threshold.

The engine and forward fuselage penetrated the office of the Chief Fire Officer, which was fortunately not occupied at the time. There was no fire and the occupants of the aircraft were evacuated having sustained serious injuries.

This Bulletin contains facts relating to the accidents which have been determined up to the time of issue. This information is published to inform the public and the aviation industry of the general circumstances of the accidents at the preliminary/stage and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

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Since the pilot attributed the accident to a loss of throttle response, an inspection of the engine controls was undertaken. The engine had become detached from the fuselage on impact, and both the mixture and carburettor control cables had clearly received tensile loads sufficient to pull them through their pinch bolts.

The throttle cable was of the conventional 'Bowden' type. The outer sheath had clearly been stretched as the engine broke free, but the inner cable, which is swaged into the hollow end of the throttle butterfly actuating rod, had pulled-out cleanly from the swage.

Despite metallurgical examination of the failed swage, it has not been possible to establish whether the separation was due to impact forces or possibly due to a pre-impact condition such as an inadequately formed swage. It was noted however that, should such a disconnection occur, a light torque spring would turn the throttle butterfly to the fully open position.