

AAIU Report No. 2000/0010
AAIU File No. 2000/0019
Published: 20/08/2000

Aircraft Type and Registration:	Piper Cub J3C65, EI-CUB
No. and Type of Engines:	One Continental A65-8
Aircraft Serial Number:	16010
Year of Manufacture:	1946
Date and Time (UTC):	26 th March 2000, 1120 hours
Location:	Galway Airport
Type of Flight:	Private
Persons on Board:	Pilot – One Passenger – One
Injuries:	Pilot – None Passenger - Minor
Nature of Damage:	Aircraft extensively damaged
Commanders Licence:	German, Private Pilot Licence (Aeroplane)
Commanders Age:	48 years
Commanders Flying Experience:	310 hours (including 87 hours on type)
Information Source:	ATCO Galway Airport. AAIU Field Investigation

1 HISTORY OF THE FLIGHT

The pilot, who is a member of a private flying group in Galway, occupied the rear cabin seat, with his wife as passenger in the front cabin seat. He intended flying from Galway Airport to Birr, Co. Offaly, returning on the same afternoon to Galway.

Runway 26 was the active runway. The pilot stated that after getting airborne the right wing of the aircraft was lifted by a gust of wind. Despite his full control input the aircraft was blown some 90° left of the runway direction and flew about 80 metres over the grass perimeter and impacted the airfield boundary stone wall. The aircraft demolished part of this wall and came to rest inverted in the adjacent ploughed field. There was no fire, the pilot exited the rear of the aircraft unharmed.

The airport Fire Services were quickly on the scene and spread foam over the crash site and helped remove the passenger from the crushed front cabin area. She was then transferred to hospital in Galway city for medical attention and was released later in the afternoon.

1.1 Weather information

An aftercast obtained from Met Éireann gave the following details:

General Weather Situation

The area lay in a fresh and gusty unstable northwesterly airstream with occasional showers.

Estimate of weather conditions at Galway Airport

Surface wind	:	320/12-15 kt with gusts 25-28 kt
2000 ft wind	:	340/30 kt
Visibility	:	10+ km
Cloud	:	Sct Cu/CB 1800-2000ft
Temperature	:	9° C
Dewpoint	:	5° C
Mean Sea Level Pressure	:	1010 hPa
Freezing Level	:	3500 ft

Galway local area forecast (LAF), issued 260400 UTC

Valid	:	260600/261500
Wind	:	30015kt ocnl 310 18G 28kt
Visibility	:	10+ km ocnl 5-7 km
Weather	:	ocnl showers rain/hail
Cloud	:	Sct 200 ft ocnl Sct 1200 ft Bkn 1800 ft

Weather report issued by Galway Airport at 1120 UTC on 26 Mar'00

Wind	:	320 13 G 27 kt
Visibility	:	10 Km
Cloud	:	Sct CB 1800 ft Sct SC 3000 ft
Temperature	:	10° C
QNH	:	1010 hPa

1.2 OTHER INFORMATION

- (a) The Piper Cub is a popular two-seat light cabin monoplane with a non-retractable tail-wheel type landing gear. It is fitted with a moving tailplane pitch trim system. The trailing edge of the tailplane is mounted on the fuselage via a hinge, and the leading edge is raised or lowered to trim the aircraft. The leading edge is moved by a screw jack.

This screw jack is activated by cables attached to a crank handle located beside the front seat, on the left hand side of the cabin. When the crank is rotated anticlockwise the leading edge of the tailplane is lowered, producing tail down trim. The full range of the crank is approximately 19 rotations of the crank. A trim position indicator is located just above the crank handle. Because of the range of movement of the tailplane, this system produces a powerful trimming effect.

The pilot stated that part of his normal pre-take-off checks was to wind the trim crank handle back fully to the rear stop (tail-down) and then forward again 3 or 4 rotations, as he had a passenger and full fuel tank (he said, if solo, he would wind forward the lever 5 or 6 rotations,). The trim position indicator is not clearly visible from the back seat, hence the pilot's use of various amounts of rotations to achieve the correct trim setting.

In the immediate post accident investigation, the Investigators noted that the tailplane was in the fully tail down trim position. The pilot stated that the crank handle may have been moved aft during the difficult extraction of the passenger by the Fire Service personnel. However, further examination by the Investigators found that, due to impact damage, the crank handle was incapable of rotation. In addition, due to compaction of the fuselage, the trim cable had lost its tension and had become detached from the activating pulley on the screw jack.

- (b) In the Approved Flight Manual for the Piper Cub J3C-65, Schedule of Performance, General, it states:

“Maximum demonstrated cross wind component – 10k (12 mph)”

- (c) The use of the 4 Point Harness probably prevented serious injury to the pilot and his passenger.

This Report does not sustain any Safety Recommendations



Photograph of crash scene, EI-CUB