

FINAL REPORT

AAIU Report No: 2010-020
State File No: IRL00910047
Published: 17/11/2010

In accordance with the provisions of SI 460 of 2009, the Chief Inspector of Air Accidents, on 26 June 2010, appointed Mr. Paul Farrell as the Investigator-in-Charge to carry out a Field Investigation into this Accident and prepare a Report. The sole purpose of this Investigation is the prevention of aviation Accidents and Incidents. It is not the purpose of the Investigation to apportion blame or liability.

Aircraft Type and Registration:	Europa XS, G-SRYY
No. and Type of Engines:	1 x Jabiru 3300 A
Aircraft Serial Number:	PFA 247-13806
Year of Manufacture:	2005
Date and Time (UTC):	26 June 2010 @ 19.18 hrs
Location:	Cork Airport (EICK), Co. Cork, Ireland
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - Nil
Injuries:	Crew - Nil Passengers - Nil
Nature of Damage:	Fractured nose wheel
Commander's Licence:	Private Pilot Licence (Aeroplane), issued by the Irish Aviation Authority (IAA)
Commander's Details:	Male, aged 45 years
Commander's Flying Experience:	205 hours, of which 5 were on type
Notification Source:	ATC Duty Manager, EICK
Information Source:	AAIU Report Form submitted by the Pilot, AAIU Field Investigation

SYNOPSIS

On landing, the aircraft bounced back into the air. The aircraft nose then pitched down and the aircraft landed on the nose wheel. The nose wheel detached, the fractured nose leg scraped along the runway and the aircraft slewed to the left of the runway.

1. FACTUAL INFORMATION

1.1 History of the Flight

The aircraft departed from Garston Farm Airfield, a 775 m x 25 m grass runway near Marshfield in England at 18.00 hrs. The aircraft routed over Wales, across the Irish Sea to Waterford and onwards to Cork.

FINAL REPORT

On entering the Cork Air Traffic Control Zone (CTR) the aircraft was asked to orbit at Dunkettle. The Pilot estimated that he orbited about five times. He was then cleared to finals for Runway (RWY) 17 where he was again requested to orbit, this time to allow for departing jet aircraft traffic at EICK.

The Pilot told the Investigation that, following a normal approach, he proceeded to finals at about 70 kts Indicated Air Speed (IAS). The wind was 13 kts at 200° M, and as a result the aircraft was crabbing. As the aircraft crossed the threshold of RWY 17 the Pilot applied left rudder to straighten the aircraft. The Pilot flared the aircraft and observed that with the aircraft in ground effect it was not subject to any cross wind effects and he did not need to apply rudder to maintain heading. Aircraft speed at this time was about 60 kts IAS, which the Pilot described as normal.

The Pilot then closed the throttle, moved the stick slightly rearwards and awaited the touch down. However, the aircraft then dropped suddenly and quickly, landed on the main wheels, bounced back up into the air and then pitched nose down and landed hard on the nose wheel, followed by the two main wheels. The nose wheel fractured and separated, and the propeller contacted the runway surface. The Pilot heard scraping as the severed nose leg dragged on the runway. The Pilot informed the Investigation that the aircraft was fitted with an aural stall-warning device; this device was not activated during the accident sequence. Following the accident the Pilot, who was not injured, exited the aircraft unaided. There was no fire.

The Pilot candidly told the Investigation that he was unable to estimate the height of the aircraft immediately before the first drop nor was he able to estimate the height of the bounce other than to say, "*it was a good bounce ... more than just two feet*". At EICK, RWY 17 is an asphalt surfaced 2133 m x 45 m runway with 7.5 m asphalt shoulders. The Pilot also informed the Investigation that he believed that the aircraft was very sensitive to turbulence either from environmental factors or from other aircraft.

1.2 Damage to Aircraft

The aircraft suffered significant damage including a fractured nose wheel and impact damage on the tips of each of the three propeller blades.

1.3 Experience on Type

The Pilot had 5 hours on type comprising 2 hours of type conversion training in the UK and 3 hours amassed during the accident flight. During the type conversion training the Pilot completed 3 landings on grass runways at a small airfield.

1.4 Licensing and Certification

The Pilot held a valid Private Pilot Licence (Aeroplane) issued by the IAA. The aircraft was home-built and registered in the UK by the Civil Aviation Authority (CAA). As a home-built aircraft registered in the UK, a Member State of the European Civil Aviation Conference (ECAC) and issued with the appropriate UK Light Aircraft Association Certificate of Validity – Permit To Fly, in accordance with IAA Aeronautical Notice A19 the aircraft was approved to operate in Irish Airspace.

FINAL REPORT

2. ANALYSIS

The Pilot had limited experience on type. He had carried out three previous landings, all on grass runways at a small airfield. The accident landing was his first landing on a hard paved runway that he described as, “*a fine, big runway*”. Although unable to estimate the height of the aircraft in the flare or the bounce, given the Pilot’s description of a good bounce of more than two feet, the initial drop would have been from an even greater height (than the bounce). During his previous landings at a small airfield the Pilot would have had, perhaps unknowingly, better visual cues and references regarding aircraft height and runway surface position than would have been available to him when landing on a paved runway at an international airport. The most probable cause of the sudden drop is that the aircraft was flared too high above the runway surface. Following the sudden bounced landing, the Pilot’s lack of type experience may have resulted in an inappropriate response to the bounced landing.

3. CONCLUSIONS

(a) Findings

1. The aircraft was appropriately certified.
2. The Pilot was properly licensed.
3. The aircraft was probably flared too high above the runway surface.
4. The aircraft experienced a bounced landing followed by a “*nose wheel first*” landing.
5. During the nose wheel first landing, the nose wheel fractured and separated from the aircraft.
6. The aircraft suffered substantial damage including a fractured nose wheel and damage to all three propeller blades.
7. The Pilot was uninjured and exited the aircraft unaided.
8. There was no fire.

(b) Probable Cause

An inappropriate response to a bounced landing.

(c) Contributory Factors

1. Flaring the aircraft too high above the runway surface.
2. Lack of aircraft type familiarity.

4. SAFETY RECOMMENDATIONS

This Investigation does not sustain any Safety Recommendations.

- END -