



Air Accident Investigation Unit Ireland

FACTUAL REPORT

ACCIDENT

Tecnam P2002-JF, EI-JPK

Coonagh, Co. Limerick

14 February 2015



**An Roinn Iompair
Turasóireachta agus Spóirt**

Department of Transport,
Tourism and Sport

Foreword

This safety investigation is exclusively of a technical nature and the Final Report reflects the determination of the AAIU regarding the circumstances of this occurrence and its probable causes.

In accordance with the provisions of Annex 13¹ to the Convention on International Civil Aviation, Regulation (EU) No 996/2010² and Statutory Instrument No. 460 of 2009³, safety investigations are in no case concerned with apportioning blame or liability. They are independent of, separate from and without prejudice to any judicial or administrative proceedings to apportion blame or liability. The sole objective of this safety investigation and Final Report is the prevention of accidents and incidents.

Accordingly, it is inappropriate that AAIU Reports should be used to assign fault or blame or determine liability, since neither the safety investigation nor the reporting process has been undertaken for that purpose.

Extracts from this Report may be published providing that the source is acknowledged, the material is accurately reproduced and that it is not used in a derogatory or misleading context.

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¹ **Annex 13:** International Civil Aviation Organization (ICAO), Annex 13, Aircraft Accident and Incident Investigation.

² **Regulation (EU) No 996/2010** of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation.

³ **Statutory Instrument (SI) No. 460 of 2009:** Air Navigation (Notification and Investigation of Accidents, Serious Incidents and Incidents) Regulations 2009.



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In accordance with Annex 13 to the Convention on International Civil Aviation, Regulation (EU) No 996/2010 and the provisions of SI 460 of 2009, the Chief Inspector of Air Accidents Mr Jurgen Whyte on 14 February 2015, appointed himself as the Investigator-in-Charge to carry out an Investigation into this Accident and prepare a Report.

Aircraft Type and Registration:	Tecnam P2002-JF, EI-JPK	
No. and Type of Engines:	1 x Rotax 912 S2	
Aircraft Serial Number:	079	
Year of Manufacture:	2008	
Date and Time (UTC⁴):	14 February 2015 @ 11.33 hrs	
Location:	Coonagh Airfield (EICN), Co. Limerick, Ireland	
Type of Operation:	General Aviation	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - Nil	Passengers - Nil
Nature of Damage:	Damage to nose wheel and propeller	
Commander's Licence:	UK PPL ⁵	
Commander's Details:	Male, aged years 36	
Commander's Flying Experience:	183 hours, of which 25 were on type	
Notification Source:	Station Manager, Shannon ATC	
Information Source:	AAIU Report Form submitted by Pilot AAIU Investigation	

⁴ **UTC:** Co-ordinated Universal Time. All timings in this report are quoted in UTC (the same as local time on the day of the occurrence).

⁵ **PPL:** Private Pilot Licence.

SYNOPSIS

Following an uneventful landing at Coonagh Airfield (EICN) and while the aircraft was decelerating to a slow speed on the runway, the Pilot experienced difficulty in maintaining directional control. The aircraft slowly veered to the left side of the runway and encroached onto the soft grass verge. The nose wheel collapsed and separated. The aircraft pitched nose down, damaging the propeller. There were no injuries to the two persons on board.

1. FACTUAL INFORMATION

1.1 General

Prior to the occurrence, the Pilot had completed approximately 50 minutes flying, which included two uneventful landings on Runway (RWY) 28. The weather was good with near calm conditions. The Pilot decided to do a third and final circuit to land in order to bring the flight time to a full hour. He reported that he performed a standard approach to RWY 28, flared and touched down within the first third of the runway. After lowering the nose wheel, the pilot applied normal hand-lever braking to slow the aircraft down. Following approximately 100 metres (m) of ground roll, the Pilot felt that there was something wrong with the nose wheel and thought that *"the tyre might be punctured"*. He continued to slow the aircraft down by using the hand-lever brake. The aircraft started to veer slowly to the left of the runway centreline. The Pilot attempted to correct the drift with the nose wheel steering, however the steering was unresponsive. In addition, there was no rudder authority to assist as the aircraft was travelling at too low a ground speed at that stage. The aircraft's left main wheel and nose wheel encroached into the soft grass verge on the left side of the runway at a point approximately 280 m along the runway (**Photo No. 1**).

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Photo No. 1: Left main wheel and nose wheel tracks adjacent to runway.



The aircraft's nose wheel dug into the soft ground, collapsed and separated. As the aircraft pitched nose down, the rotating propeller made contact with the soft ground and one blade detached. The aircraft's nose came to rest on the engine cowling (**Photo No. 2**).



Photo No. 2: Final resting position of EI-JPK.

The Pilot, having completed his shutdown checks, exited the aircraft with his passenger through the sliding canopy. There were no injuries. The airfield emergency service arrived on-scene within one minute.

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The Pilot advised the Investigation that he had completed a pre-flight walk-around inspection of the aircraft and confirmed that, at that time, all tyres were in good condition and fully inflated.

1.2 Aircraft Information

The Tecnam P2002-JF (EI-JPK) is a two-seater side by side, low wing aircraft powered by a Rotax 912 S2 series four-cylinder, four-stroke engine. It has a fixed tricycle undercarriage with nose wheel steering linked through the rudder pedals. The brake control is activated by a single central hand lever located between the seats. A parking brake valve is located on the console between the seats.

1.3 Airfield Information

The airfield is located two nautical miles (nm) west of Limerick City and has one asphalt runway orientated 10/28. The runway is 416 m long and 9 m wide.

1.4 Nose Wheel

An examination of the separated nose wheel determined that the tyre and tread were in good condition, but the tyre had deflated and the bead had slipped inward on the wheel rim (**Photo No. 3**).



Photo No. 3: Separated nose wheel and deflated tyre.

2. AAIU Comment

The Pilot confirmed that the aircraft's three tyres were serviceable during his pre-flight inspection and as two circuits had been successfully completed, it is likely that the nose wheel tyre deflated sometime during the latter stages of the flight or during the final landing/rollout manoeuvre. A loss of tyre pressure will affect the overall form and rigidity of the tyre itself and when a nose wheel deflates it can present difficulties in maintaining directional control. This is particularly relevant when the aircraft does not have differential braking, as was the case with the subject aircraft.

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While the aircraft was travelling at a relatively low speed during the rollout, there was still sufficient momentum for the aircraft to veer off the centreline. The loss of effectiveness of the nose wheel steering, the lack of available rudder authority and the narrowness of the runway all contributed to the runway excursion.

- END -

In accordance with Annex 13 to the Convention on International Civil Aviation, Regulation (EU) No. 996/2010, and Statutory Instrument No. 460 of 2009, Air Navigation (Notification and Investigation of Accidents, Serious Incidents and Incidents) Regulation, 2009, the sole purpose of this investigation is to prevent aviation accidents and serious incidents. It is not the purpose of any such investigation and the associated investigation report to apportion blame or liability.

A safety recommendation shall in no case create a presumption of blame or liability for an occurrence.

Produced by the Air Accident Investigation Unit

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