



Air Accident Investigation Unit Ireland

FACTUAL REPORT

ACCIDENT

Coopavia, PIEL CP301A, G-ASLX Mullinahone Airfield, Co. Tipperary

5 July 2017



Aonach Éireann
Turasóireachta agus Spórt

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 2009,³ 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.

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 No. 460 of 2009, the Chief Inspector of Air Accidents on 11 July 2017, appointed Mr Howard Hughes as the Investigator-in-Charge, to carry out an Investigation into this Accident and prepare a Report.

Aircraft Type and Registration:	Coopavia, PIEL CP301A, G-ASLX	
No. and Type of Engines:	1 x Continental Motors C90-14F	
Aircraft Serial Number:	292	
Year of Manufacture:	1958	
Date and Time (UTC) ⁴ :	5 July 2017@ 10.15 hrs	
Location:	Mullinahone Airfield, Co. Tipperary	
Type of Operation:	General Aviation	
Persons on Board:	Pilot - Nil	Passengers - Nil
Injuries:	Pilot - Nil	Passengers - Nil
Nature of Damage:	Destroyed	
Commander's Licence:	Private Pilot Licence (PPL) Aeroplane (A)	
Commander's Age:	54 years	
Commander's Flying Experience:	405 hours, of which 368 were on type	
Notification Source:	Pilot	
Information Source:	AAIU Report Form submitted by the Pilot	

⁴ UTC: Co-ordinated Universal Time. All times in this report are UTC (UTC plus one hour equals Local Time).

SYNOPSIS

The Pilot had intended performing a flight to Sligo airport. He brought the aircraft out of his hangar to hand-start the engine by swinging the propeller. He set the throttle to '*a higher than the usual setting*', and set the ignition switch to '*ON*'. There was no one aboard the aircraft, and the aircraft wheels had not been chocked. When the Pilot swung the propeller the engine started and the aircraft commenced moving across the airfield, where it impacted a boundary hedge and overturned. The aircraft came to rest inverted on an electric fence in a neighbouring field. A post impact fire occurred which destroyed the aircraft. There were no injuries.

1. FACTUAL INFORMATION

1.1 History of the Flight

The Pilot had intended flying the aircraft from his private airfield at Mullinahone, Co. Tipperary, to Sligo airport (EISG). At approximately 10.15 hrs the Pilot took the aircraft out of the hangar, set the ignition switch to the '*ON*' position, advanced the throttle, and commenced an engine start by hand-swinging the propeller. There was no one aboard the aircraft and the brakes were not set. The main wheels were not chocked. When the engine started the aircraft began to move forward. The aircraft travelled approximately 70 metres east across the airfield and impacted a ditch and hedge. On impact with the ditch, the aircraft overturned and came to rest inverted on an electric fence on the other side of the hedge. The propeller impacted the ground and the engine stopped. The Pilot stated that fuel began leaking from the aircraft, and that the electric fence may have acted as a source of ignition for the fuel spillage. The fuel ignited and the aircraft was destroyed, see **Photo No. 1**. The Pilot, who had pursued the aircraft on foot, remained at a safe distance, and was not injured.

3

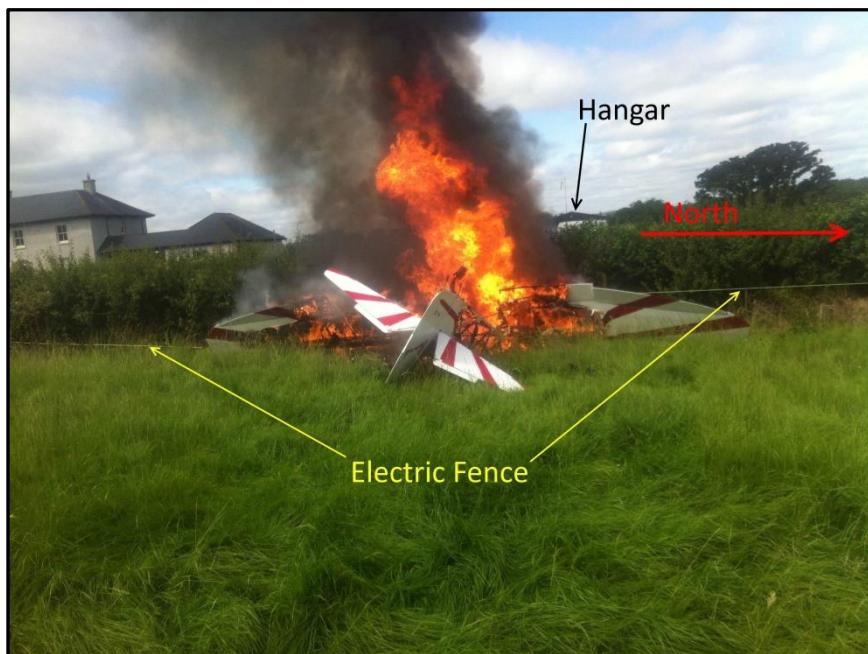


Photo No. 1: G-ASLX in its final resting position (Courtesy of Pilot/Owner)



The Pilot submitted a detailed description of the event, including a photographic survey of the site. He also provided his assessment of the cause of the accident. He stated that on the day of the accident he was in somewhat of a hurry to get airborne; he had not chocked the aircraft and set the throttle '*a little too high*', all of which he stated, contributed to the accident.

2. AAIU COMMENT

The AAIU is aware of a number of similar accidents that have occurred in the past, which have been the subject of investigations by other agencies. A case in point is a Fatal Accident Report produced by the Australian Air Transport Safety Board (ATSB). The report⁵ contains the following comments:

'Hand swinging an aircraft propeller is recognised across the aviation industry as a hazardous procedure. Although hand swinging is permitted under the civil aviation regulations, it should only be undertaken when no other alternatives exist to start the aircraft engine and all necessary precautions have been taken to mitigate the hazards'.

'Generic guidance on hand swinging a propeller, published by the Civil Aviation Safety Authority (CASA), the US Federal Aviation Administration (FAA) and various pilot forums, covered topics including:

- *Deciding to hand start*
- *Positioning the aircraft*
- *Securing the aircraft*
- *Setting the engine controls*
- *Having assistance.*

4

[...] The guidance advised that:

- *Chocks of an appropriate size and material should be applied to both main wheels*
- *The aircraft should be tied down adequately, using an appropriate restraint*
- *The brakes should be set*
- *The fuel system and engine controls set for a normal start.*

CAR 231 requires the person manipulating the propeller to know the correct starting procedure for the aircraft. Additionally, it allows for assistance to be provided by having a qualified person at the controls of the aircraft, if a suitably qualified person is available. [A] FAA handbook⁶ noted that 'the procedure should never be attempted alone'.

⁵ ATSB Report '*Ground handling accident involving Cessna 172RG, VH-MKG, Parafield Airport, South Australia*', published 24 February 2017.

⁶ FAA Flying Handbook (FAA-H-8083-3B) Chapter 2, '*Ground Operations*'.

The Pilot, who is a member of the UK Light Aircraft Association, informed the AAIU that he had passed on details of the accident to them, and agreed for this report to be reproduced in a future edition of their monthly periodical, *Light Aviation*. He also agreed for the report to be circulated for safety awareness purposes in Ireland by the General Aviation Safety Council of Ireland (GASCI).

The AAIU welcomes the assistance provided by the Pilot following this accident and his willingness to have the occurrence highlighted for safety purposes.

- 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

AAIU Reports are available on the Unit website at www.aaiu.ie



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