

*The original of the Final Report was issued in the Slovak language.  
In case of inconsistency original version in Slovak language is applicable.*



MINISTRY OF TRANSPORT, CONSTRUCTION  
AND REGIONAL DEVELOPMENT  
OF THE SLOVAK REPUBLIC



AVIATION AND MARITIME INVESTIGATION AUTHORITY  
Námestie slobody 6, P.O.BOX 100  
810 05 Bratislava 15

# FINAL REPORT

on investigation of accident  
of unpowered paraglider **Axispara Pluto L**  
without registration number

Reg. No. SKA2014005

The investigation of occurrence has been conducted pursuant to Art. 18 of the Act No. 143/1998 on Civil Aviation (Civil Aviation Act) and on Amendment of Certain Acts and in accordance with the Regulation (EU) No. 996/2010 of the European Parliament and of the Council on investigation and prevention of civil aviation accidents and incidents, governing the investigation of civil aviation accidents and incidents.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Aircraft Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of investigation is to establish causes of accident, incident and to prevent their occurrence, but not to refer to any fault or liability of persons.

This final report, its individual parts or other documents related to the investigation of occurrence in question have an informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other accidents and incidents with similar causes.

## A. INTRODUCTION

Operator:	private person
Type of operation:	general aviation / sport and recreational flying
Type:	unpowered paraglider Axispara Pluto L (hereinafter "UPG")
Registration No.:	not issued
Take-off site:	Straník near Žilina
Site of planned landing:	Teplička nad Váhom
Flight phase:	ongoing flight
Place of accident:	Teplička nad Váhom N 49° 13' 23,3'' E 18° 48' 55,1''
Date and time of accident:	25.08.2014, 16:00

Note: All time data in this report are stated in the UTC time.

## B. INFORMATIVE SUMMARY

On 25.08.2014 at 15:30 the pilot took off from the area of Straník near Žilina. During the flight an accident occurred, in which the pilot was seriously injured.

The following commission was appointed for investigation of the air accident:

Ing. Milan BOHUŠ  
Ing. Juraj GYENES

The report is issued by:  
Aviation and Maritime Investigation Authority  
of the Ministry of Transport, Construction and Regional Development  
of the Slovak Republic

## C. MAIN PART OF REPORT

1. FACTUAL INFORMATION
2. ANALYSES
3. CONCLUSIONS
4. SAFETY RECOMMENDATIONS

### 1. FACTUAL INFORMATION

#### 1.1 History of the flight

The pilot conducted a UPG flight from the area of Straník near Žilina, which is used for unpowered parachute and hang flying.

Short before landing, in the phase of descent manoeuvre, the UPG airfoil became deformed and UPG fell to the ground from a height of less than 15 m.

Daytime: day

Flight rules: VFR

#### 1.2 Injuries to persons

Injury	Crew	Passengers	Other persons
Fatal	-	-	-
Serious	1	-	-
Minor	-	-	-
None	-	-	-

#### 1.3 Damage to UPG

UPG was not damaged in the accident.

#### 1.4 Other damage

No circumstances with potential claims for compensation of other damage toward a third party were notified to the Aviation and Maritime Investigation Authority.

#### 1.5 Personnel information

A national of the Slovak Republic, male, aged of 40 years

Holder of the flying sports vehicle pilot licence, issued by the Light Aircraft Association of the Slovak Republic on 15.10.2008, with marked validity until 19.09.2010.

Medical certificate of 19.09.2008, marked in the personnel record of LAA SR, valid 2 years, with marked validity until 19.09.2010.

##### Flying experience:

Total flight hours	150 h
For last 90 days	20 h
For last 30 days	6 h

##### Qualifications:

Pilot of unpowered paragliders – Pilot PK-A.

## 1.6 UPG information

a) Type: Axispara Pluto L  
Registration No: not issued  
Serial number: 12855606LC  
Year of manufacture: 2008

Total operating hours since manufacture: not identified  
Certificate of airworthiness : **not issued**  
Third-party insurance: invalid

FAI sport class	O - PG
Safety category	Standard
Minimálna rýchlosť letu	22 km/h
Maximum flight speed	50 km/h
Minimum takeoff weight	95 kg
Maximum takeoff weight	125 kg

### b) Takeoff weight of UPG at the time of accident

Empty weight	5.0 kg
Weight of crew	88.0 kg
Weight of equipment and luggage	6.0 kg

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Total takeoff weight at the time of accident: 99.0 kg

The takeoff weight of UPG at the time of accident was observed.

## 1.7 Meteorological situation

South direction wind with speed up to 5 m/s that diminished toward the evening.

## 1.8 Aids to navigation

N/A.

## 1.9 Communications

The radio communication was not available.

## 1.10 Aerodrome information

N/A.

## 1.11 Flight recorders

N/A.

## 1.12 Wreckage and impact information



## 1.13 Medical and pathological information

The pilot of UPG suffered a compressive fracture of vertebra L1 with a 1/3 height reduction. Internal injuries: negative.

## 1.14 Fire

No fire broke out.

## 1.15 Survival aspects

The pilot of UPG had at his disposal a rescue parachute during the flight, but he could not use it because of the low flight altitude.

## 1.16 Tests and research

N/A.

## 1.17 Organizational and management information

N/A.

## 1.18 Additional information

1. During the flight the pilot was not carrying a document proving the professional competence of a pilot of flying sport vehicles. He later produced this document, but it was invalid.
2. The UPG in question does not appear in the vehicle and equipment register of LAA SR.
3. The inquiry of UPG information at the paraglider manufacturer:  
On 22.03.2011 the technical inspection of UPG was conducted with conclusion "satisfactory", with validity of 100 flight hours or marked validity until 22.03.2012.  
According to the serial number the manufacturer confirmed the year of manufacture 2008.

## 1.19 Useful or effective investigation techniques

Standard investigation methods were used.

## **2. ANALYSIS**

During the critical flight the pilot made a descent manoeuvre, so-called spiral glide. Upon its termination, when coming out of the spiral flight, the pilot wanted to turn left. UPG collapsed and got into a negative turn, probably due to excessive braking and achievement of stall speed, followed by airflow separation from the airfoil and loss of the lifting force. The pilot tried to balance this collapse, but he failed due to the low altitude and UPG fell to the ground.

After the accident the condition of UPG and its equipment did not show any signs of excessive wear or damage. During the critical flight the pilot had at his disposal a rescue parachute, but the use of rescue equipment was impossible because UPG fell to the ground from a height of less than 15 m.

## **3. CONCLUSIONS / CAUSE OF ACCIDENT**

### **3.1 Findings**

- The pilot had not valid qualifications for the critical flight.
- The certificate of airworthiness of UPG was not produced.

### **3.2 Causes of air accident**

Deformation of the UPG airfoil caused by a loss of flight speed.

## **4. SAFETY RECOMMENDATIONS**

The final report on investigation of the air accident does not contain any recommendations.

Bratislava, 06.11.2014