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

FINAL REPORT

on the safety investigation of an air accident
of flying sports device
type Axis Paraglider Compact 3 M
registration mark **OM-P835**

Reg. No: SKA2018007

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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/Owner: X AIR / private person
Operation type: general aviation/sports and recreational flying
Type: flying sports device - paraglider, Axis Paraglider Compact 3 M
(hereinafter referred to as the "PG")
Registration mark: OM – P835
Take-off site: Donovaly – Nová hoľa
Flight phase: slope soaring in the take-off area
Accident site: 48° 53' 19.71" N, 019° 13' 32.28" E
Accident date and time: 14 October 2018, 12:45

Note: All time data in this Report is reported in UTC time.

B. INFORMATION SUMMARY

On 14 October 2018 at 12:45, the PG collapsed when the pilot was performing slope soaring in the area of Donovaly – Nová hoľa (below the take-off site) and fell to the ground from 15 to 20 metres.

The fall of the PG was seen by tourists who reported the occurrence to an employee of the PARK SNOW Donovaly - TELEMIX Nová hoľa cableway, who then reported the accident to members of the MOUNTAIN RESCUE SERVICE, area centre Veľká Fatra, Donovaly, Mišúty (hereinafter referred to as "MRS"). The MRS members then called the Helicopter Emergency Medical Service (HEMS), Banská Bystrica centre, to transport the pilot.

A committee was set up to investigate the causes of the accident:

Ing. Igor BENEK – Chairman of the Safety Investigation Committee
Ing. Róbert GREXA – Member of the Safety Investigation Committee

The Report has been issued by:

The Aviation and Maritime Investigation Authority
of the Ministry of Transport and Construction of the Slovak Republic

C. MAIN PART OF THE REPORT

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

1. FACTUAL INFORMATION

1.1 History of the flight

On the above-stated day, the pilot made 3 flights from the Donovaly - Nová hoľa area, including the critical flight.

Prior to each flight, the pilot made a pre-flight check of his PG, strapped in to his harness and took off. There were no complications during the first two flights and they were performed within the limits of permitted flight levels in this area. The pilot finished the flights on the official landing area near the lower station of the Nová hoľa cableway.

Approximately after 30 minutes of the third flight, when the pilot was performing slope soaring, the PG collapsed at an altitude of about 20 metres above the terrain. In spite of his efforts, the pilot failed to recover the canopy of the PG to a standard flight position. The PG then fell from 15 to 20 metres.

The pilot suffered injuries to his head and spine.

The fall of the PG was reported to an employee of PARK SNOW Donovaly who then reported it to MRS members. The HEMS crew from Banská Bystrica was also asked for cooperation. The Mountain Rescue Service members provided immediate medical treatment to the pilot; in the meantime, the HEMS doctor was also winched down and she continued to provide first aid. The pilot was conscious and communicating. Then, the injured pilot was transported by helicopter to the F. D. Roosevelt Faculty Hospital with Health Centre in Banská Bystrica.

The flight accident was reported to the Aviation and Maritime Investigation Authority of the Ministry of Transport and Construction of the Slovak Republic by a representative of the Light Aircraft Association of the Slovak Republic.

Time period: day

Flight rules: VFR

1.2 Injuries of persons

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

1.3 **Damage to the PG**

The PG was not damaged in the occurrence.

1.4 **Other damage**

No circumstances have been reported to the Aviation and Maritime Investigation Authority which might lead to any other claims for compensation of damage against a third party.

1.5 **Personnel information**

Pilot:

Citizen of the Slovak Republic, aged 62, holder of a PG-A pilot license issued by LAA SR.

He has been a pilot since 2016.

According to data in the request for extension of his pilot license, the total number of the pilot's PG flight hours was 9:40 as of 3 July 2018.

The pilot stated that as of the accident date he had flown 20 flight hours in total.

1.6 **Information about the PG**

Type:	Axis Paraglider Compact 3 M
Registration mark:	OM – P835
Serial number:	92701903M
Date of manufacture:	March 2017
Manufacturer:	Axis Paraglider

The airworthiness certificate was issued on 21 February 2018 with marked validity for two years.

1.7 **Meteorological information**

On 14 October 2018, the sky was clear in the Donovaly municipality, Nová hoľa area, at the time of the accident. The air temperature reached 11°C, the relative humidity was about 55% and the horizontal visibility was approximately 60 km. A southerly wind was blowing in the area in question at a speed of approximately 6 m/s, gusting to 9 m/s. The weather in the Nová hoľa area was stable in the afternoon, with the air temperature gradually decreasing from about 13:00 and without any major changes to the wind direction or speed.

The air flow in the free atmosphere was at 2,000 metres above sea level in the Donovaly cadastral area; a southerly wind was blowing at a speed of up to 10 m/s. At low levels the wind direction did not change considerably and the wind speed was decreasing gradually. At 1,500 metres above sea level, a southerly wind was blowing at a speed of approximately 6 m/s, and at 1,000 metres above sea level a south-easterly wind was blowing at a speed of up to 5 m/s. Since the air temperature was decreasing and the sun was setting, thermal convective movements were gradually becoming weaker in the afternoon.

1.8 **Aids to navigation**

N/A

1.9 **Communications**

N/A

1.10 **Aerodrome information**

Take-off site: Donovaly - Nová hoľa take-off area.

1.11 **Flight recorders and other recording devices**

N/A

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1.12 Wreckage and impact information

The PG fell close to its take-off site. Coordinates of the accident site:
48° 53' 19.71" N, 019° 13' 32.28" E



1.13 Medical and pathological information

The pilot suffered injuries to his head and spine during the fall.

1.14 Fire

None.

1.15 Survival aspects

It was not necessary to perform any investigation or rescue with SAR equipment.

1.16 Tests and research

N/A

1.17 Organizational and management information

The flight activities were performed in Class G airspace in accordance with aviation regulations valid in the territory of the Slovak Republic.

1.18 Additional information

N/A

1.19 Useful or effective investigation techniques

Common investigation methods were applied.

2. ANALYSIS

Pilot activity

During the first two flights, the pilot did not have to deal with any critical situation, so he decided to perform a third flight. As he stated, the previous flights were calm, without any significant impacts of turbulence, and the wind was acceptable for performing a third flight. During the third flight, when the pilot was slope soaring in the area of the ridge, the canopy of the PG collapsed. The canopy collapse was probably caused by a thermal bubble which was torn off as a result of uneven overheating of the earth's surface in the area of the flight. With regard to his flight experience, the pilot did not respond appropriately in the situation, which led to the PG falling. The pilot did not have sufficient altitude to use a reserve parachute.

3. CONCLUSIONS / Causes of the air accident

3.1 Findings

According to the documentation submitted, the pilot had valid qualifications for performing flights within the particular paraglider category.

The pilot had sufficient experience to perform the flight.

The PG had a valid airworthiness certificate.

3.2 Causes of the air accident

Thermal turbulence in the area of the flight caused by uneven overheating of the earth's surface.

Insufficient experience of the pilot in handling critical situations at low altitudes.

4. SAFETY RECOMMENDATIONS

The Final Report on the safety investigation of an air accident does not contain any recommendations.

In Bratislava, on 12 November 2018