

*The original of the Final Report was issued in the Slovak language
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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 the air accident
of paraglider MAC PARA TECHNOLOGY, LUCKY 3-34
without a license plate

Reg. No.: SKA2017001

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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: Private person
Operation type: General aviation / Sport and Recreational Flights
Type: paraglider MAC PARA TECHNOLOGY, LUCKY 3-34
(Hereinafter referred to as "PG")
Registration mark: Without a license plate
Place of take-off: Straník near Žilina (city)
Flight phase: Ascending
Accident location: Flight area of Straník near Žilina
Accident date and time: March 31, 2017, 10:25

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

B. INFORMATION OVERVIEW

On March 31, 2017, the pilot came into contact with the carrier surface after take-off. Wrapped in the PG, he fell across the trees to the ground.

During the fall the pilot suffered injuries incompatible with life.

Person delegated to investigate the causes of the accident:

Ing. Igor BENEK

The report to be issued by:

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

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C. MAIN PART OF THE REPORT

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

1. FACTUAL INFORMATION

1.1 History of the flight

The pilot with PG started at 10:25. During the ascending flight a symmetrical folding of the leading edge of the PG occurred. The pilot solved the situation with an intense short braking of PG. After releasing the control strings, a sudden, intense acceleration of PG followed. As a result of the sudden, intense acceleration, the pilot came into contact with the bearing surface (glider cloth) and got wrapped in the PG. Subsequently, the pilot fell across the trees to the ground.

During the fall the pilot suffered injuries incompatible with life.

The air accident was reported to the Aviation and Maritime Investigation Authority of the MDV of SR by the authorized representative of the Light Aircraft Association of the Slovak Republic.

Time period: Day

Flight rules: VFR

1.2 Injuries of persons

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

1.3 Damage to the paragliding set

During the rescue work, the PG was damaged (can be repaired by the manufacturer) and the pilot's harness was destroyed.

The emergency parachute was undamaged.

1.4 Other damages

To the Aviation and Maritime Investigation Authority there were reported no circumstances with other possible claims for damages against a third party.

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1.5 Personnel Information

Pilot:

Citizen of the Czech Republic, age 61,
holder of the "Parachute Glider Pilot" license, issued by the Light Aircraft Association of the Czech Republic on December 17, 2015, with validity until December 16, 2025.

Flight Experience:

Total flights of pilot: 25 hours, as determined by flight records published on www.xcontest.org.

In 2016, the time of his total flights was 13 hours 24 minutes.

1.6 Information on PG

Type:	LUCKY 3-34
Serial number:	1334-2255
Manufacturer:	MAC PARA TECHNOLOGY

Technical specifications:

Commissioning Date:	October 21, 2014
Wing area (unfolded):	34.57 m ²
Wing area (projection):	31.7 m ²
Spread:	13.5 m
Breadth:	5 m
Maximum depth of the wing:	3.24 m
Number of chambers:	45
Weight:	5.9 kg
Min. - Max. Take-off weight:	115-150 kg
Minimum speed:	23 - 25 km/h
Maximum speed:	45-47 km/h
Sliding:	8.3

The PG driver's license was valid until November 08, 2018 or 100 hours of flight.

1.7 Meteorological information

On March 31, 2017, along the back of the anticyclone above the Black Sea and the Caspian region, warm air was flowing from the southwest to our area.

On March 31, 2017 at 10:25, in the territory of Žilina (city), Straník Region, it was mostly a little cloudy without rainfall. The predominant type of cloudiness was Cirrus and lower Cumulus fractus or Cumulus humilis with a lower base height of about 2000 m, which covered about 1/8th of the sky. The air temperature was about 12°C with a relative humidity of about 40 %. Visibility was 40 to 50 km. A south to south-westerly wind was blowing at a speed of 5 to 7 m/s.

The air flow in the free atmosphere over the Žilina city territory on March 31, 2017 at 10:25 was the following: at 1500 m above sea level it was southerly at a speed of about 8 m/s. Air temperature at this altitude level was around 6°C. At 1000 m above sea level there was a south to south-westerly wind at a speed of about 6 m/s and the air temperature was around 9°C. At lower levels, the wind gradually shifted to the southwest and to the west, with a wind velocity of approximately 5 to 7 m/s at 770 m above sea level. In the morning hours, during gradual warming, the speed and direction of the wind were affected by thermal convection, and in lower levels up to app. 600 m above sea level, there was also mountain-valley circulation.

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1.8 Aids to navigation

NEXUS tablet, XTRACK software. During the aviation accident, the tablet was damaged to such an extent that a flight record could not be obtained.

1.9 Communications

No connection possible.

1.10 Aerodrome information

The Straník training and sports area is designed for take-off and landing of paragliders and hang gliders. Only VFR flights can be performed. Maximum wind force for PG start: 8 m/s.

1.11 Flight recorders

GoPro Outdoor Camera. The flight record was damaged during the impact following the fall and could not be played back.

The NEXUS tablet into which the GPS flight record was saved. Due to the damage caused by the accident (damage to the touchscreen), the record cannot be downloaded.

1.12 Wreckage and impact information

The pilot fell about 400 metres away from the take-off site. The site of the air accident was located in rugged, forested, steep terrain, which hindered rescuers' access.

Coordinates of the point of fall impact: 49°14'06"N
18°49'52"E



1.13 Medical and pathological information

From the judiciary point of view, the violent death of the pilot was in direct causal connection to the PG air accident.

At the time of the aviation event, the pilot was not affected by alcohol, non-prescription drugs, or narcotics that could reduce his attention during flight.

Neither during external and internal inspection, nor following additional laboratory experiments on biological materials taken during autopsy, no acute or chronic disease changes have been identified that could adversely affect the pilot's attention or conduct at the time of the aviation event or could be causally related to his death.

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1.14 Fire

None.

1.15 Survival aspects

N/A.

1.16 Tests and research

An assessment of the technical condition of the PG and the harness as well as the functionality of the rescue system was performed.

1.17 Organizational and management information

Flight activity was performed in accordance with the aviation and tourism regulations in force in the territory of the Slovak Republic.

1.18 Additional information

N/A.

1.19 Useful or effective investigation techniques

Common methods of investigation have been used.

2. ANALYSIS

Pilot activity

After taking off from the Straník area, the pilot flew into a turbulent air stream, causing deformation of the bearing surface of the PG (frontstall).

Due to his lack of experience, the Pilot handled this situation with a severe braking of PG, then releasing the steering strings (controllers), resulting in a sudden intense acceleration of PG in front of the pilot.

This very intense reaction (the situation) the pilot did not correct enough / could not solve; he flew into the top of the PG and, wrapped in it, fell across the trees down to the ground.

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3. CONCLUSIONS / Cause of the air accident

3.1 Findings

Pilot:

- According to the submitted documentation, he had a valid qualification for performing flights in the given PG category,
- He did not have a pilot flight record in writing (it is not mandatory in the Czech Republic); the pilot registered his flights at www.xcontest.org,
- At the time of the occurrence he was not influenced by alcohol, non-prescription drugs, or narcotics that could reduce his attention during flight.

3.2 Causes of the air accident

Insufficient flight experience of the pilot and failure to master the PG piloting technique after entering into a turbulent environment caused by thermal turbulence.

4. SAFETY RECOMMENDATIONS

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

In Bratislava, June 30, 2017