



# 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



Reg. No.: SKA2013007

## FINAL REPORT

on investigation of accident of  
sport flying device / SFD  
type FITI 128  
Registration No. **OK-NZR02**

Date: 16.06.2013

Place: Agro Airport Myjava

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

Type of aircraft: SFD / powered paraglider FITI 128 ("PPG")  
Registration No: OK-NZR02



Operator: Luděk Skokan  
Take-off site: Agro Airport Myjava  
Flight phase: take-off  
Type of operation: general aviation / sport and recreational flying  
Place of accident: Agro Airport Myjava  
Geographic coordinates of the place of accident: N 48° 45' 57''  
E 17° 31' 32''  
Date and time of accident: 16.06.2013, 06:15

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

## **B. INFORMATIVE SUMMARY**

On 16 June 2013 at 06:15, during the Myjava PPG and Paraglider Rally, in the phase of take-off of PPG with registration number **OK-NZR02**, PPG landing gear hit a person who suffered a serious injury. PPG lost the speed, hit the road shoulder and turned over.

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

Ing. Juraj GYENES  
Ing. Zdenko BIELIK

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**

A meeting of pilots of powered parachutes and powered paragliders took place in the area reserved for aviation agricultural works in Myjava, Turá Lúka, local site "u Vankov" (Agro Airport Myjava), on 14 June 2013 – 16 June 2013.

On 16 June 2013 at 06:15 a pilot of PPG took off from the area with the intent to fly home. Having reached the required takeoff speed (80 km/h) PPG get off the ground, reached the height of 50-100 cm and the pilot continued to increase the speed in the holding-down phase. In this take-off phase the pilot felt the gust of wind from the right side, which according to his statement caused the PPG offset to the left just when the pilot decided to climb with PPG. According to the statement of the pilot saw a person in front of him at that very moment, but was unable to avoid him. The pilot hit this person with the PPG landing gear (front part), in spite of the fact that the person ducked at the last moment. At the critical time the hit person (who participated in provision of refreshment during the event) was inspecting a small (ultralight) aircraft, parked in that area.

Daytime: day  
Flight rules: VFR

## 1.2 Injuries to persons

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

## 1.3 Damage to PPG

PPG suffered a serious damage.



## 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

### Pilot in command:

A national of the Czech Republic, male, aged of 46 years  
Holder of the pilot licence No. UT 140098 issued by the Light Aircraft Association of CR class with marked validity until 16 August 2014.

### Qualifications:

Pilot of powered paraglider

Flying experience: Total flight hours: 580 h, of which with the type: 300 h  
For the last 30 days: 18 h

## 1.6 PPG information

	<b>Wing</b>	<b>Landing gear</b>
Type:	FITI 128	TOMI CROSS 5
Manufacturer:	Luděk Skokan,	Tomi aviation
Year of manufacture:	2007	2003
Registration number:	OK- NZR 02	
Serial number:	5/249	

Total operating hours since manufacture: not identified.

PPG is a two-seat version.

The certificate of airworthiness issued by the Light Aircraft Association of CR with validity extended until 12 June 2015.

Third-party insurance: ČSOB pojišťovna, a.s., member of holding ČSOB, No. ZPV13 1238.

## 1.7 Meteorological situation

On 16 June 2013 in the evening hours the area of the Agro Airport Myjava – u Vankov had weather characterized by a high amount of clouds to overcast sky.

At the time between 04:00 and 06:00 the area was characterized by very low precipitation with total amount of 0.1 mm. The sun rouse at 02:52.

At 06:15 the weather was characterized by a high amount of clouds to overcast sky, air temperature of 19°C and visibility to 20 km. In the altitude of 10 m above the ground weak wind was blowing at average speed up to of 3.0 m/s.

It is very probable that at around 06:15 the wind direction changed from the north-east to the north-west to west wind direction, with gusts speed of up to 4.5 m/s. It was short after the rain and the soil surface was humid after previous weak precipitation.

## 1.8 Aids to navigation

N/A

## 1.9 Communication

N/A.

## 1.10 Information about operating area

Position: N: 48°45'45,40";  
E: 17°31'35,34"

Runway direction: 167°– 347°

Dimensions of runway: length: 350 m, 100 m + 100 m clearway  
width: 20 m

Height above sea level: 373 AMSL

Surface: grass

Type of area: non-public

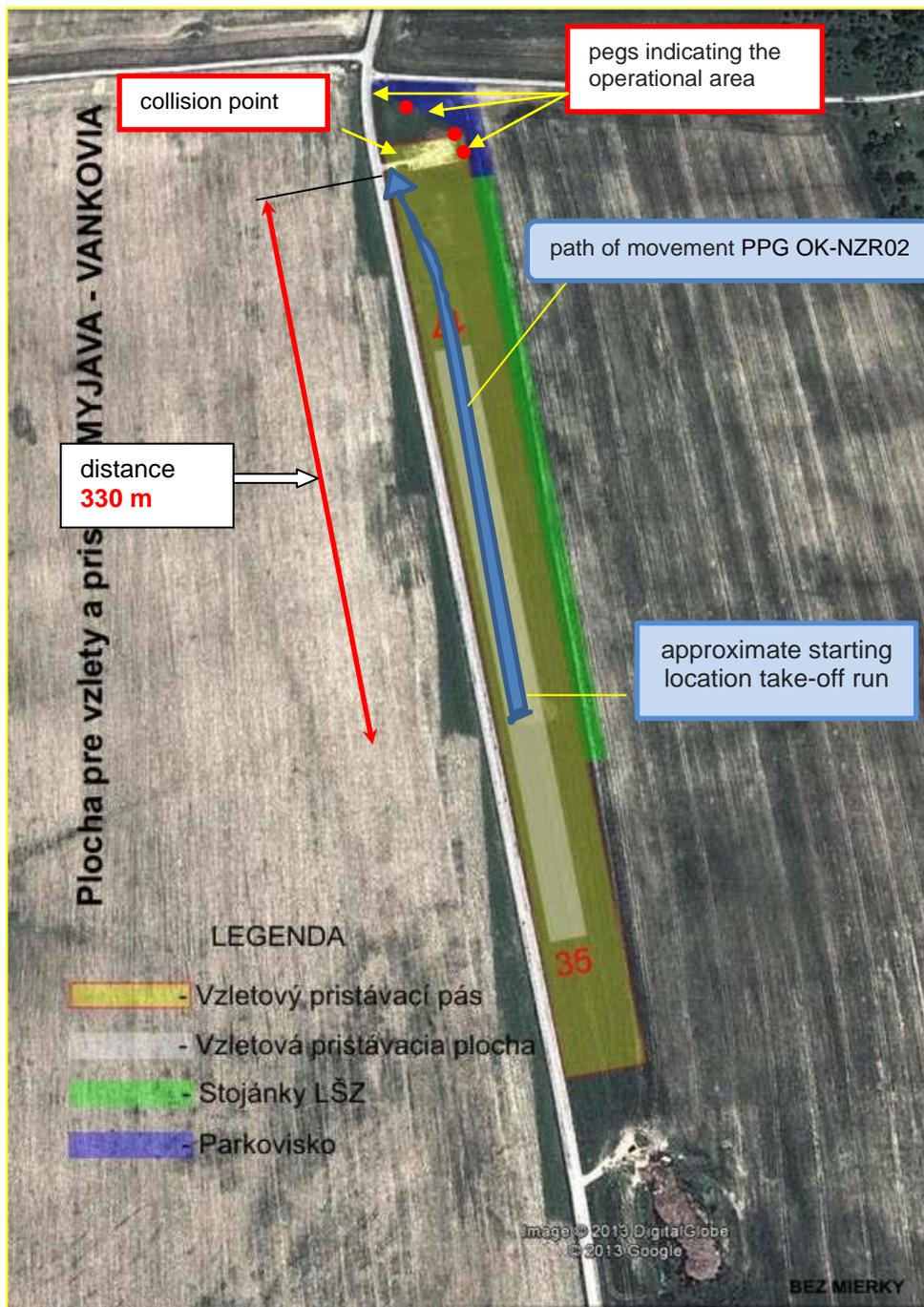
The organizers of the "Myjava Rally" properly marked the individual operating surfaces in the affected area as runway with dimensions of 400x20 m, taxiing belt, standing and parking area for vehicles. In the extension of the runway 35 they marked with pegs and partially with tape the area to which access was prohibited for unauthorized persons during the flight operations.

## 1.11 Flight recorders

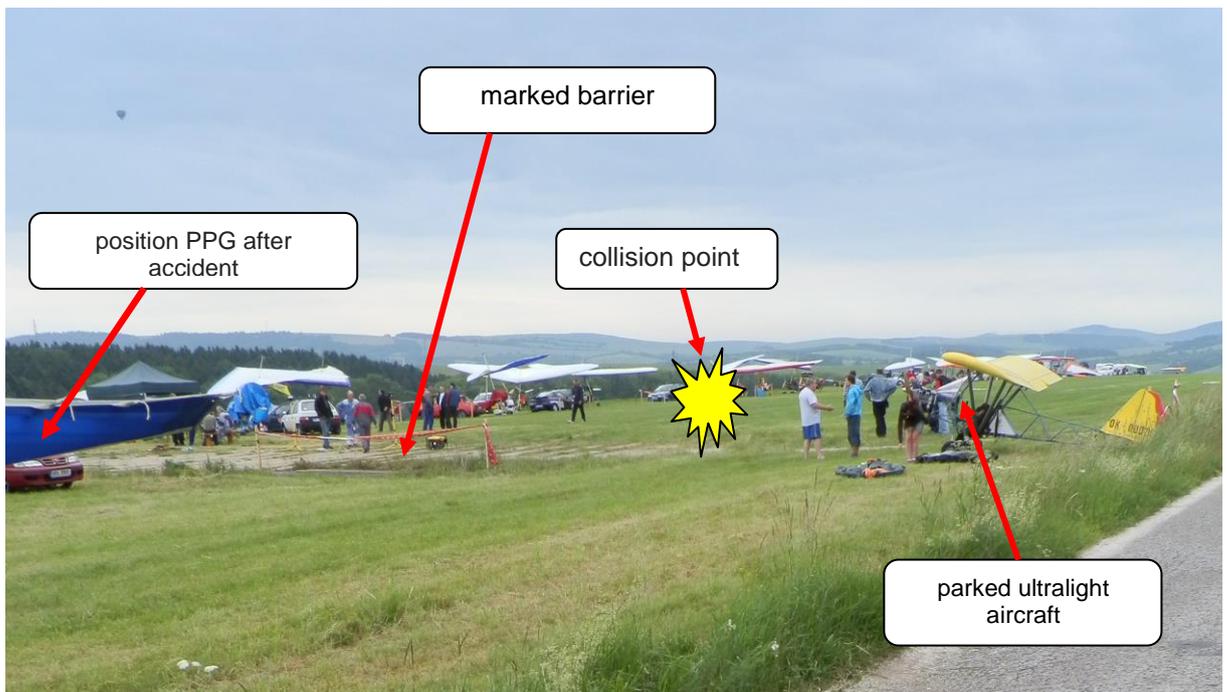
N/A

## 1.12 Wreckage and impact information

The point of collision is described by geographic coordinates: N 48° 45' 57'', E 17° 31' 32''



Rough sketch of movements of PPG and its collision with the person



Approximate situation at the point of collision at the time of accident

### 1.13 Medical and pathological information

N/A

### 1.14 Fire

No fire broke out.

### 1.15 Aspects of survival

The rescue operations were carried out by present participants of the take-off and called ambulance crew.

### 1.16 Tests and research

Tests and research were not performed.

### 1.17 Organizational and management information

The pilot of PPG did not hold the authorization for flights over the territory of SR required by the Slovak law for aircraft not holding the standard certificate of airworthiness issued in accordance with ICAO ANNEX 8 or for pilots not holding the licence issued in accordance with ICAO ANNEX 1 (PART-FCL 1 or 2).

The pilot followed the provision of Guideline **LZ-1 from the year 2000** issued by the Light Aircraft Association of SR and approved by the Civil Aviation Authority of the Slovak Republic, where Title 3, Article 3.1.1 provides as follows:

*“Flights with SFD over the territory of the Slovak Republic are permitted to:*

*a/ holders of valid pilot licence issued by LAA SR (SFD pilot trainee licence, licence of SFD pilot licence), which **in case of non-residents to holders of a licence replacing this licence (pilot licence of LAA CR, IPPI card). SFD must have the third-party insurance. Non-residents are obliged to prove that they are insured against injury or death.**”*

This provision is contrary to Article 22 (6) of the Act No. 143/98 on Civil Aviation.

### 1.18 Additional information

The report on PPG flight tests, Part B:

*Flight performance* indicates the length of the take-off over an obstacle with height of 15 m to a distance of 100m in case of solo flight and 140 m at maximum take-off weight.

From accounts of the organizers of the event it follows that the logistic personnel (e.g. providing refreshment to the participants) had been familiarized with the rules of movement in the area where the event took place, i.e. the injured person should not have been present in the area where the collision with PPG occurred.

According to the statement of the pilot the take-off procedure was implemented in the standard manner until the moment when in the holding-down phase (flight in the height of 1 m for the purpose of increasing the speed for further climbing) tried to push the trapeze forward in order to be able to climb. He assessed this situation as abnormal because under normal circumstances the pilot usually pulls the trapeze back in this take-off flight to prevent very steep climbing. The pilot explained it by potential change of aerodynamic characteristics of the wing due to remainders of night raindrops.

### 1.19 Useful or effective investigation techniques

Standard investigation techniques were used.

## 2. ANALYSIS

The runway was marked by white tissue stripes and the clearway in its extension was marked by wooden pegs. The injured person stayed in the prolonged axis of the runway in the marked territory during the accident, i.e. from the viewpoint of flight operation safety this person stayed in the unauthorized area.

Based on data in the report on flight tests of the affected PPG, the pilot was supposed to reach the minimum height of 15 m after coverage of approximate distance of 100 m from the point of ground roll. If the pilot reached the minimum height at this point the collision of the person with the landing gear of PPG would not occur and the pilot of PPG would miss this person with sufficient height spacing in spite of the fact that he did not use the whole length of the runway for the take-off.

From the statement of the pilot of PPG it is clear that the increasing of the speed took its normal course and that the pilot reached the speed required for take-off in the determined area and hence was able to start adequate climbing in the usual manner. The fact that the machine did not climb as usual is explained by the pilot by potential remainders of water on the plastic cover of the powered glider, which allegedly caused the deterioration of aerodynamic characteristics of the wing. However, after coverage of such distance (about 300 m), achievement of speed higher than 90 km/h and taking into account the fact that all other SFD started without similar problems, the reason provided by the pilot seems to be improbable. On the basis of these facts the commission concludes that the pilot of PPG probably did not use all technical capabilities of the machine and did not start to climb in good time. Consequently, the machine did not have sufficient height at the point of collision with the injured person to safely miss the obstacles and persons present on the margin of the area reserved for the take-off.

As for the obstacles situated in the area of collision, it was only by chance that PPG hit the present person instead of the ultralight aircraft parked in the area marked as operating areas, which the injured person was inspecting at that time, or the pegs with tape marking the obstacle.

### 3. CONCLUSIONS / CAUSE OF ACCIDENT

#### 3.1 Findings

- neither the pilot nor PPG had the authorization from the Civil Aviation Authority of the Slovak Republic for performance of flight operations in the airspace of the Slovak Republic, as required by the Civil Aviation Act (Act No. 143/2008 Coll.).
- when flying over the territory of the Slovak Republic, the pilot of PPG followed the Guideline LZ-1 of the Light Aircraft Association of the Slovak Republic, whose Article 3.1.1 is contrary to the quoted Civil Aviation Act.

#### 3.2 Causes of air accident

- the cause of the accident was the collision of PPG with the person situated in the prolonged axis of the take-off of PPG in the area marked as operating areas.
- mishandling of the flying technique during the take-off by the pilot of PPG.
- presence of a person in the unauthorized area.

### 4. SAFETY RECOMMENDATIONS

On the basis of investigation of the causes of the accident of

PPG type **FITI 128**

Registration No. **OK-NZR02**

Date of accident: **16.06.2013**

We recommend **the Light Aircraft Association of the Slovak Republic and the Civil Aviation Authority of the Slovak Republic** to take the following measure:

- to harmonize the provision of Article 3.1.1 of the Guideline LZ-1 of the Light Aircraft Association of the Slovak Republic with Article 22 (6) of the Act No. 143/98 on Civil Aviation;

We recommend **the Light Aircraft Association of the Slovak Republic** to take the following measure:

- when organizing events similar to this one to put more stress on prevention of access of unauthorized persons and occurrence of obstacles in the operating areas.

Bratislava, 03.12.2013