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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 glider type **VSO-10**  
Registration No. **OM-7501**

Reg. No.: **SKA2014002**

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:	SNA gen. M.R. Štefánika / SNA Aeroklub Košice
Type of operation:	general aviation
Type of glider:	Orličan, VSO-10
Registration No:	OM-7501
Take-off site:	Airport Partizánske / LZPT
Flight phase:	air tow take-off
Place of accident:	LZPT
Date and time of accident:	03.07.2014, 10:20

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

## B. INFORMATIVE SUMMARY

On 3 July 2014 at 10:20, during a flight day of the 34th inter-club glider race "ALEXANDER MAKARENKO MEMORIAL 2014", the pilot of a towing aeroplane after the take-off from the grass runway 25 (hereinafter "RWY25") disconnected the towing rope from aircraft type VSO-10, Registration No OM-7501 (hereinafter "glider") for safety reasons.

After the disconnection of the rope the glider slowed down to a stalling speed, by which he got into the stall mode in a low altitude, followed by a ground collision in the clearway.

The pilot was slightly injured and the glider was destroyed in the accident.

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

Ing. Igor BENEK

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

On 3 July 2014 the pilot of a glider was conducting a competitive flight according to the flight schedule issued by the race organiser SNA gen. M. R. Štefánika /Aeroklub Partizánske. Having taxied the towing aeroplane in front of the glider to RWY25, the assistant connected the towing rope and lifted the glider wings to the horizontal position, which was the signal for the pilot of the towing aeroplane to start the take-off.

When the pilot of the glider had not the cockpit latched at that time, he tried to secure it by his left hand in the take-off phase. When he failed he wanted to disconnect the glider from the towing aeroplane. He attempted to shift his hand from the cockpit latch, but this started to open, so the pilot decided to keep the cockpit in the position until he had reached the circling height above the airport, instead of disconnecting the glider.

In the unstick phase the air brakes of the glider dropped, which made it more difficult for the pilot to fly the glider.

Subsequently the towing aeroplane started to descend and the pilot disconnected the towing rope from the glider for safety reasons, after receiving the radio and visual signals.

Once the glider had been disconnected, it slowed down and fell to the ground from a height of 15 m. The pilot did not succeed to recover the glider from the flight regime – the stall and the glider crashed to the ground.

The pilot was slightly injured and the glider was destroyed in the accident.

Daytime: day

Flight rules: VFR

#### 1.2 Injuries to persons

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

#### 1.3 Damage to aircraft

The glider was destroyed in the accident:

- fully destroyed front fuselage front section
- broken aircraft body and
- damaged wings.



**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 Slovak Republic, aged of 62 years, holder of the glider pilot licence GPL issued by the Civil Aviation Authority of the Slovak Republic with marked validity until 31.12.2021.

Medical certificate of 2nd class with marked validity until 08.04.2015.

**Qualifications:**

Gliders (GLD) - with marked validity until 31.12.2015

Glider flight instructor (GLD) - with marked validity until 31.12.2015

**Flying experience:**

Total flight hours: 609 h 26 min and 596 flights

Total flight hours in 2014: 5 h 14 min and 4 flights

**1.6 Aircraft information**

Type:	VSO-10
Registration No:	OM-7501
Serial number:	150165
Manufacturer:	Orlíčan, n.p. Choceň Czech Republic

The certificate of airworthiness No. 0437-S, issued by the Civil Aviation Authority of the Slovak Republic on 08.04.2008, the certificate of verification of airworthiness was issued on 15.06.2014 with marked validity until 02.07.2015.

Total operating hours since manufacture: 1 405 h 16 min and 765 flights

Third-party insurance: Association of Underwriters-Lloyd's,  
No. BO713AVNBG1400460-918-02.

#### 1.7 Meteorological situation

N/A.

#### 1.8 Aids to navigation

N/A.

#### 1.9 Communications

The glider was equipped by radiocommunication equipment enabling two-way radio communication with all air stations at every moment of flight.

#### 1.10 Aerodrome information

N/A.

#### 1.11 Flight recorders

Approved GNSS flight recorder.

Flight recorder (FR), type approved by IGC FAI for validation of gliding performance.

#### 1.12 Wreckage and impact information

The glider fell to an even ground without major obstacles behind the airport LZPT.



#### 1.13 Medical and pathological information

N/A.

#### 1.14 Fire

No fire broke out.

### 1.15 **Survival aspects**

The search and rescue operations using SAR means were not required.

### 1.16 **Tests and research**

No tests or inspections of parts of the glider were required.

The pilot in his testimony stated that the glider had shown no technical problems before the accident.

### 1.17 **Organizational and management information**

The flight operations were conducted in accordance with aeronautical standards valid in the territory of the Slovak Republic and with local rules.

The race was organised in accordance with the FAI Sport Regulations, General Part, the FAI Sport Regulations, Section 3, Gliding, issued in October 2005, and with their supplements.

### 1.18 **Additional information**

N/A.

### 1.19 **Useful or effective investigation techniques**

Standard investigation methods were used.

## 2. **ANALYSIS**

The towing aircraft with the glider took off in spite of the fact that the glider pilot had not executed important operations before the take-off – closing and latching the cockpit, securing the air brakes and closely observing the activity of the assistant on RWY25, who had connected the towing rope and lifted the glider wings to the horizontal position in accordance with general rules after the taxiing of the towing aircraft. The putting of the wings to the horizontal position was a signal for the pilot of towing aircraft to take off with the glider.

During the take-off the pilot of the glider concentrated mainly on the latching of the cockpit, which caused that he had not a free hand to solve a much serious problem with dropped air brakes.

During the take-off the pilot of towing aircraft registered the dropping of air brakes of the glider, which caused the slowing down of the air train. Although he had warned the pilot of the glider through the radio, the latter did not react to this warning because he was busy with latching the cockpit and waited until the glider had reached the circling height when he wanted to disconnect the towing rope.

After the said slowdown the towing aircraft went into a descending flight, to which the pilot reacted by deciding to interrupt the towing flight for safety reasons. In doing so he issued visual signals and physically disconnected the glider from the towing aircraft.

After the disconnection of the towing rope the glider was slowed down even more by the dropped air brakes, due to which its flight speed decreased to the stalling speed. The pilot was unable to master this stall regime because of the low flight height and the glider was destroyed in the later collision with the ground.

Paradoxical about this accident is that the effort at rescue of the cockpit hood resulted in destruction of the whole glider and injury of the pilot.

### **3. C O N C L U S I O N S / CAUSE OF ACCIDENT**

#### **3.1 Findings**

##### **Pilot in command**

- According to submitted documentation had valid qualifications for conducting flights with aircraft of given category.

##### **Glider**

- Had valid documentation and did not show any fault before the accident.

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

- Inconsistent execution of important operations before the air tow take-off
- Poor mastering of flying technique by the pilot of the glider after its disconnection from the towing aircraft.

##### **Secondary cause**

- Excessive effort of the pilot at latching the cockpit in the take-off phase which limited his ability to steer the glider.

### **4. SAFETY RECOMMENDATIONS**

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

Bratislava, 04.08.2014