



**MINISTRY OF TRANSPORT, POSTS AND
TELECOMMUNICATIONS
OF THE SLOVAK REPUBLIC**

Air Accident and Incident Investigation Board
Nám. slobody 6, P.O. BOX 100, 810 05 Bratislava 15

Reg. No: SKA2010014

FINAL REPORT

on air accident investigation
of aircraft type **VSO 10B Gradient**
registration: **OM-8503**

Date: 02.07.2010

Place: cadastre of the municipality of Žitná Radiša

A. INTRODUCTION

The investigation of an air accident [AA], serious incident [SI], 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.

The final report is issued in accordance with the Regulation L 13 that is the application of the provisions of ANNEX 13 Air accident and Incident Investigation to the Convention on International Civil Aviation and with the Council Directive 94/56/EC, establishing the fundamental principles governing the investigation of civil aviation accidents and incidents.

The exclusive aim of investigation is to establish causes of an accident or serious incident and 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 the air accident have informative character and can only be used as recommendation for the implementation of measures to prevent occurrence of other air accidents and serious incidents with similar causes.

Operator / Owner:	Slovenský národný aeroklub gen. M.R. Štefánika, Aeroklub Nové Zámky o.z.
Type of aircraft:	VSO - 10B Gradient (glider)
Registration:	OM-8503
Place of take-off:	LZPT
Place of landing:	cadastre of the municipality of Žitná Radiša
Flight phase:	ground landing
Date and time of accident:	02.07.2010, 15:10 hrs

Note: All times in this Report are UTC.

B. INFORMATIVE SUMMARY

On 2 July 2010 during a competitive flight in the 30th Glider Memorial Race of Alexander Makarenko, a glider pilot made a forced ground landing, during which the aircraft body was damaged as a result of hard touchdown.

The pilot of the aircraft was not injured.

The following person was appointed as investigator of the air accident:

Ing. JANČULA Maroš

The report is issued by:

Air Accident and Incident Investigation Board
of the Ministry of Transport, Posts and Telecommunications 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 2 July 2010 during a competitive flight in the 30th Glider Memorial Race of Alexander Makarenko, a glider pilot performed the take-off at 12:30 hrs. After the take-off and initial climbing phase, at 13:30 hrs the pilot set out on a cross-country flight. During the flight that was quiet he got in an area of breaks in overcast, which caused an increased descent. When the pilot flew past the last point without finding an updraft, he registered a low height and decided for ground landing. He found a landing area, made a prospecting turn and determined the direction of descent to the chosen landing area. He evaluated the chosen landing area as suitable and decided to land in the middle of this area. During the landing manoeuvre, due to an incorrect estimate of the flare-out height, the aircraft landed hard with the front part of the body. The landing gear closed and the aircraft body was damaged. After touchdown the Aircraft turned 90° left from the landing axis.

The aircraft pilot was not injured.

Light conditions: Daylight

The operator reported the air accident to the Air Accident and Incident Investigation Board of MTPT SR.

1.2 Injuries to persons

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

1.3 Damage to aircraft

The aircraft suffered a substantial damage in the air accident. The bottom side of the aircraft body, partitions reinforcing the aircraft body and the landing-gear control mechanism were damaged.

1.4 Other damages

No other damage was reported to the Air Accident and Incident Investigation Board of MTPT SR.

1.5 Personnel information

Pilot-in-command:

Citizen of the Slovak Republic, aged of 45, holder of the aviation personnel licence – GPL No SK 01010375 issued by the Civil Aviation Authority of the Slovak Republic on 3 June 2005

Qualifications: GLD/gliders - with marked validity until 31 December 2011.

Medical certificate of 2nd class with marked validity until 3 July 2011.

Flying experience:

Total flying hours: 705:20 hrs

1.6 Aircraft information

a) Airframe

Type: VSO – 10B

Registration: OM-8503

Serial No: 150189

Year of manufacture: 1988

Manufacturer: Orličan – Czech Republic (manufacturing activity terminated)

Certificate of airworthiness No 3445/2008 issued by the Civil Aviation Authority of the Slovak Republic on 20 May 2008 with valid airworthiness inspection certificate valid until 10 May 2011.

d) Aircraft weight at the time of air accident:

Aircraft weight at the time of air accident: 330 kg, which is within the permitted range.

1.7 Meteorological situation

Clouds 4/8, visibility 10 km, wind speed 1m/s, wind direction 260⁰ - 280⁰.

1.8 Wreckage and impact information

The place of forced landing with a length of 2 000 m and width of 300 m is situated on a slightly undulating ground in altitude of 253 m above sea level. On the left side, in direction of landing (probable course 170⁰), there are a watercourse, trees with height of 7 m and a high-tension line with 4 m high pylons. The surface of the landing area was covered by growing crops (barley) with height of 50 cm.

The place of accident was accessible.

1.9 Survival aspects

The search and rescue using SAR devices were not required.

2. ANALYSIS

The ground landing of gliders requires the inspection of the chosen landing area by the pilots. Beside of the orientation against the wind, the selection of the landing area must take into account its surface, gradient, bearing strength and type of vegetation covering the landing area. High vegetation cover in some cases does not allow the pilot to estimate the flare-out of the glider in the final landing phase. Landing on relatively unknown ground, about which the pilot is only informed by a cursory look, puts increased psychical requirements on the pilot. All these factors, including the change of speed and orientation of surface wind and surface irregularities, cause damage to gliders in many cases.

This air accident shows a majority of the circumstances mentioned above and according to the pilot's statement the hard touchdown was caused by the wrong estimate of the flare-out height in the final landing phase.

3. CONCLUSIONS / Cause of air accident

- wrong estimate of flare-out height in the final landing phase.

4. SAFETY RECOMMENDATIONS

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

Bratislava, 9 August 2010