



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: SKA2013006

FINAL REPORT

on investigation of air accident
of flying sport vehicle / FSV
type **Fides 2 Evo M-Sky** paragliders
Registration No. **OM-P097**

Date: 12.06.2013

Place: Sološnica

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 FSV:	unpowered Fides 2 Evo M-Sky paragliders
Registration No.:	OM-P097
Operator:	private person
Take-off site:	Sološnica
Planned landing site:	Sološnica
Flight phase:	ongoing flight
Type of operation:	general aviation / sport and recreational flying
Site of air accident:	Sološnica
Geographic coordinates of the site of accident:	N 48° 27' 44,4'' E 17° 15' 00,8''
Date and time of accident:	12.06.2013, time not identified

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

B. INFORMATIVE SUMMARY

On 12 June 2013 in the morning, at time which could not be identified, the pilot made a flight near the community Sološnica, in an area used for slope soaring of paragliders, during which air accident leading to the death of the pilot occurred.

The following commission was appointed for investigation of the occurrence:

Ing. Zdeno BIELIK
Ing. Milan GREGA

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 12 June 2013 the pilot with FSV made a flight in the area of Sološnica used for slope soaring of paragliders.

The pilot used a video camera installed on the protective helmet during the critical flight. From the video recording it can be stated that the pilot had problems with the flight already during the preparation for take-off, when he needed several attempts to blow up the canopy of FSV and started 7 to 8 minutes after the first attempt.

From camera shootings and speech of the pilot it is obvious that strong crosswind was blowing from the right side during the flight. This strong wind caused problems to the pilot during the flight when FSV stayed put in the ground position at full forward speed and the pilot was unable to get to the desired location. The video recording ends during the ongoing flight, so it is impossible to exactly determine how the flight continued. The participant of the accident was performing the flight activity alone and the investigation board was unable to find any direct witnesses of the accident.

Daytime: Day

Flight rules: VFR

1.2 Injuries to persons

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

1.3 Damage to FSV

FSV was not damaged in the accident.

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 of FSV:

A national of the Slovak Republic, male, aged of 52 years, holder of flying sport vehicle pilot licence No. 4-1486 issued by Light Aircraft Association of SR on 6 August 2008, with marked validity until 10.05.2014.

Medical certificate of 10 May 2013 filed in the personnel record of professional personnel of LAA SR.

Flying experience: Total flight hours: 23; 8 hours from the last prolongation in 08/2012

Qualification: Pilot PK – A.

1.6 Information about FSV

a) Type: Fides 2 Evo M-Sky paragliders
Registration No.: OM-P097
Serial No: 200902110131
Year of manufacture: 2009

FAI sport class	O - PG
Safety category (EN)	B
Minimum flight speed	22 km/h
Maximum flight speed	45 km/h
Minimum take-off weight	82 kg
Maximum take-off weight	105 kg

b) Take-off weight of FSV at the time of air accident:

Empty weight of FSV	4.8 kg
Weight of crew	80.0 kg
Weight of equipment and baggage	15.0 kg
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Total take-off weight at the time of accident:	99.8 kg

Maximum permissible take-off weight of FSV for flight according to the Flight Manual is 105 kg. The take-off weight of FSV at the time of accident was observed.

Total operating hours since manufacture: not identified

Certificate of airworthiness issued by the Light Aircraft Association of the Slovak Republic on 27 June 2009 with marked validity until **30 June 2012**.

Third-party insurance: **Invalid**

1.7 Meteorological information

The bottom cloud base was in the altitude of 1000 to 1500 m and covered 2/8 to 3/8 of sky. Dew occurred in the morning.

The air temperature near the community Sološnica rose from 14°C at 05:00 UTC to 22°C at 12:00 UTC. Relative humidity in that period dropped from 75% to 45%, horizontal visibility in the early morning hours was 20 km and later increased to 40 km.

The sunshine was not significantly limited by clouds, it was sunny, with total duration of sunshine of 13 hours on 12.06.2013. In the area of community Sološnica, for location with coordinates N 48°27'44'', E 017°15'01'', on 12.06.2013 at 05:00 – 12:00 UTC, north wind was blowing and did not show any change of direction in time, or significant variability of direction manifested by major instantaneous deviations from prevailing direction of air flow. Until 06:00 UTC the average wind speed was 2 to 3 m/s, with gusts up to 6 m/s. Later the average wind speed increased without change of direction and achieved the average value of 6 to 8 m/s and in gusts 10 to 12 m/s between 07:00 UTC and 12:00 UTC.

These wind parameters are valid for a height of 10 m, unaffected by development or trees.

1.8 Aids to navigation

Not applicable.

1.9 Communications

Radio communication was not available.

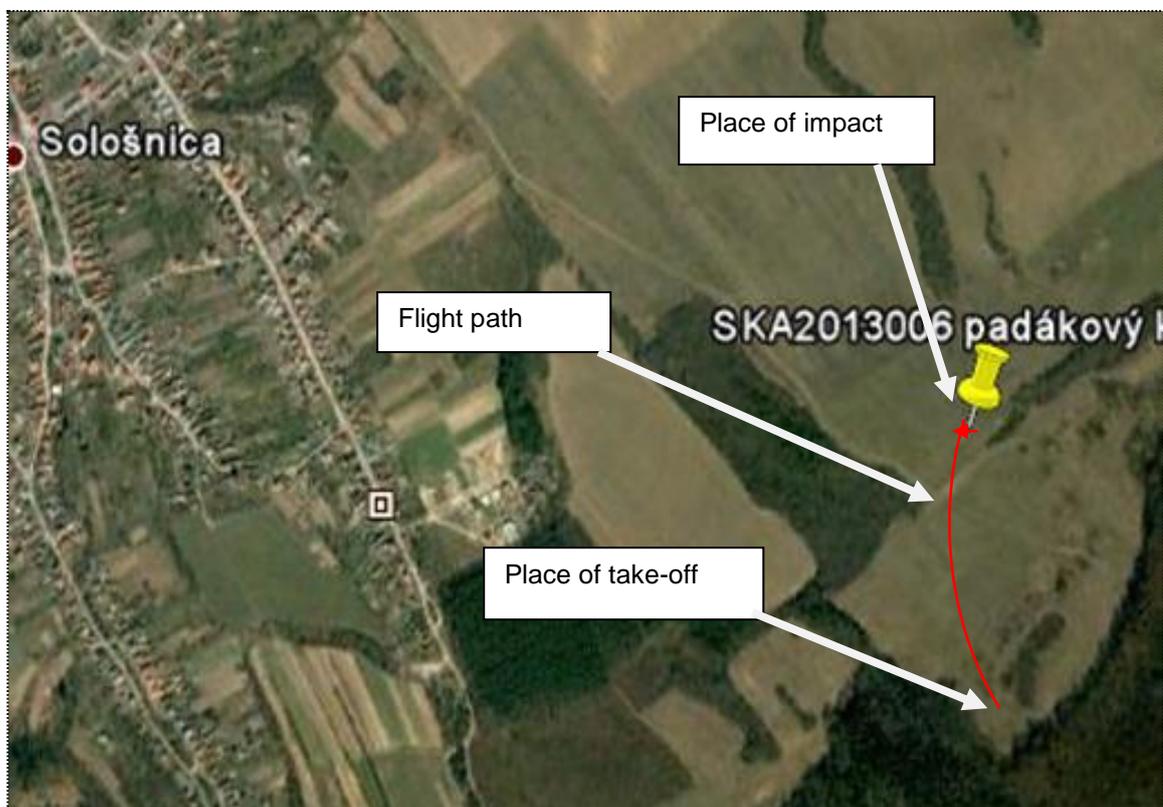
1.10 Aerodrome information

Not applicable.

1.11 Flight recorders

The take-off and a part of the flight were recorded using the video camera installed on the pilot's helmet.

1.12 Wreckage and impact information



Place of impact of the pilot: meadow, approximately 650 m away from the eastern margin of the community Sološnica.

1.13 Medical and pathological information

The cause of the pilot's death was traumatic bleeding shock caused by the fall from height.

1.14 Fire

No fire broke out.

1.15 Survival aspects

The pilot of FSV had at his disposal a rescue parachute during the flight, which did not show any signs of use during the critical flight.

1.16 Tests and research

The condition of the paraglider was implemented. FSV did not show any signs of excessive wear or damage.

The measurement of permeability of the FSV canopy showed average value of 106 s; value below 48 s was not measured at any point measured.

1.17 Organizational and management information

Not applicable.

1.18 Additional information

During the flight the pilot did not carry with him any documents or other documentation, as required by Article 14 of the Act No 143/1998 Coll. on Civil Aviation. The documentation was submitted to the investigation commission later.

1.19 Useful or effective investigation techniques

Standard investigation methods were used.

2. ANALYSIS

The pilot of FSV made the take-off and the flight in the area used for slope soaring near the community Sološnica.

From the speech of the pilot recorded by him using a video camera during the flight it is clear that the flight was made in meteorological conditions with strong headwind. On three occasions the pilot registered deformation of the paraglider leading edge. Moreover, the pilot told to himself that he was using the speed system during the flight, but even this system did not help the FSV to move forward against the ground.

From the speech it is also obvious that the pilot was making the flight alone, without presence of other persons. The video recording ended during the flight and the camera did not record the continuation of the flight or its termination.

The pilot of FSV had relatively little flying experience.

The current condition of FSV and equipment did not show any signs of excessive wear or damage. The pilot did not use the rescue parachute during the flight, so it can be concluded that unfavourable flight situation – most probably the deformation of FSV canopy and later fall – occurred in relatively low height above the ground, when the rescue parachute could not be used any more.

3. CONCLUSIONS / Cause of air accident

3.1 Findings

- the pilot had valid qualifications for the critical flight,
- the certificate of airworthiness of FSV expired on 30.06.2012,
- the pilot carried on him no documents or other documentation during the flight,
- the pilot made the flight in unfavourable meteorological conditions with regard to the wind speed.

3.2 Causes of air accident

With the highest probability, the flight in unfavourable weather conditions caused the deformation of canopy of FSV and its later fall.

4. SAFETY RECOMMENDATIONS

On the basis of investigation of causes of air accident of:

FSV type **Fides 2 Evo M – Sky paragliders**

Registration No. **OM-P097**

Date of accident: **12.06.2013**

we recommend **LAA SR** to take the following measure:

to inform the pilots of LAA SR about this final report.

Bratislava, 10.09.2013