The original of the Final Report was issued in the Slovak language.
In case of inconsistency original version in Slovak language is applicable.

MINISTRY
OF TRANSPORT
AND CONSTRUCTION
OF THE SLOVAK REPUBLIC

AMIA LNVÚ LETECKÝ a NÁMORNÝ VYŠETROVACÍ ÚTVAR

AVIATION AND MARITIME INVESTIGATION AUTHORITY
Námestie slobody 6, P.O.BOX 100
810 05 Bratislava

FINAL REPORT

on the safety investigation of an air accident

of a glider type **Standard Cirrus**

with registration mark **OM - 7274**

Reg. No: SKA2018004

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

Glider type:	Standard Cirrus
Registration mark:	OM-7274
Operator/Owner:	Aeroklub Holíč o.z., Staničná 13, 908 51 Holíč
Flight type:	general aviation/sports and recreational flying
Take-off site:	Holíč airport / LZHL
Flight phase:	winch-assisted take-off
Take-off site of the glider:	N 48°48'47“, E 017°08'18"
Impact site of the glider:	N 48°48'40", E 017°08'08"
Accident date and time:	12 May 2018, 10:52

Note: All time data in this Report is reported in UTC time.

B. INFORMATIVE SUMMARY

On 12 May 2018 at 10:51:51, a pilot with a **Standard Cirrus** glider, registration mark OM-7274 (hereinafter referred to as the "glider"), made a winch-assisted launch from a grass take-off and landing runway 22 (hereinafter referred to as "VPD22").

At 10:52:09 the glider suddenly lost forward speed and subsequently fell on its wing, while at the speed of 65 km/h its wing got caught on VPD22.

The glider was destroyed as a result of the accident.

The air traffic manager of Aeroklub Holíč immediately alerted the rescue units and reported the accident to the Aviation and Maritime Investigation Authority of the Ministry of Transport and Construction of SR.

A committee was set up to investigate the causes of the occurrence:

Ing. Igor Benek	Chairman of the Safety Investigation Committee
Ing. Juraj Gyenes	Member of the Safety Investigation Committee
Ing. Dominik Jančik	Member of the Safety Investigation Committee

The Report has been issued by:

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

C. MAIN PART OF THE REPORT

1. FACTUAL INFORMATION

1.1 History of the flight

On 12 May 2018 a glider operation was performed at LZHL with winch-assisted take-offs from VPD22. The pilot with the glider was the third one in the order. After the pilot signalled that he was ready for take-off, the runway controller gave an instruction for stretching the rope. After the rope was stretched, at 10:51, the pilot gave an instruction for take-off. The take-off start - the run-up itself - went normally; however, in a transition turn the pilot excessively pulled the elevator stick, bringing the glider to a very steep climb. This resulted in a sharp drop in forward speed, a loss of pressure and the subsequent fall of the glider on the right wing.

The glider fell on VPD22, 300 m from the take-off site.

Time of day: Day
Flight rules: VFR

1.2 Injuries of persons

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

1.3 Damage to the glider

The glider was destroyed in the accident.

1.4 Other damage

No circumstances have been reported to the Aviation and Maritime Investigation Authority which might lead to any other claims for compensation of damage against a third party.

1.5 Personnel information

Glider pilot:
citizen of the Slovak Republic, aged 21;
holder of a valid SPL issued by the Transport Authority of the SR on 3 June 2015;
holder of a valid radiotelephone operator´s restricted certificate for Aeronautical Service II issued by the Telecommunications Regulatory Authority of the SR on 5 February 2013.

Flight experience:

Total flight hours:	234 hrs. 26 min.
Total flight hours with this type of aircraft:	64 hrs. 22 min.
Number of flight hours clocked in the last 90 days:	4 hrs. 00 min.
Number of flight hours with this type of aircraft clocked over the last 30 days:	3 hrs. 19 min.

Medical Certificate:
Class 2 with marked validity until 13 October 2022
LAPL (Light Aircraft Pilot Licence) with marked validity until 13 October 2022.

1.6 Information about the glider

Type:	Standard Cirrus
Registration mark:	OM-7274
Serial number:	412
Year of manufacture:	1974
Manufacturer:	Shempp-Hirth Flugzeugbau GmbH, Kirchheim/Teck, Federal Republic of Germany
Total flight hours flown:	3,866 hrs.

Certificate of Airworthiness No. 1082/01 issued by the Transport Authority of the Slovak Republic on 17 October 2011.

Airworthiness Review Certificate No. 1082/01-081/18 issued by the Slovak National Aero Club of Gen. M.R. Štefánik on 11 May 2018 valid until 11 May 2019. Total flight hours on the airworthiness verification date: 3,866 hrs.

The maximum take-off mass of the glider - 340 kg - was not exceeded during the take-off.

1.7 Meteorological information

On 12 May 2018, at 10:52, it was semi-cloudy with no precipitation in the area of LZHL in the region of the town of Holíč. The prevailing type of clouds were Cumulus Mediocris and Congestus with the cloud base at 1,000 to 1,500 m.

The air temperature was approximately 25°C and the relative humidity was about 45%. Horizontal visibility was around 15 km. A light, changeable, mainly north-easterly wind was blowing at a speed of up to 3 m/s.

The critical glider flight was performed in an environment which may be characterized as an area with stable weather with no precipitation and with excellent visibility without any weather phenomena which might have affected the flight of the glider.

1.8 Aids to navigation

The glider was equipped for VFR flights.

1.9 Communications

The glider was equipped with an on-board radio enabling bidirectional radio connection at every moment of the flight with all aeronautical stations.

1.10 Aerodrome information

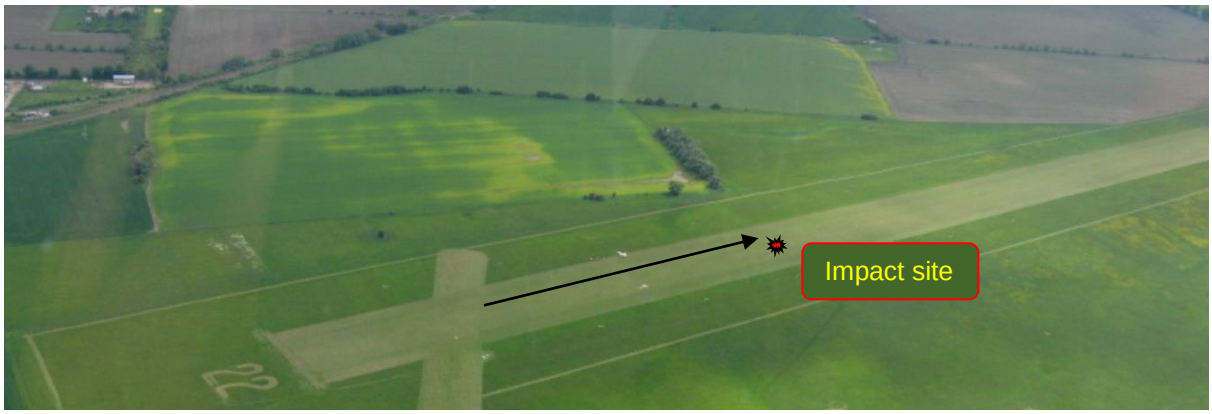
LZHL is a non-public domestic aerodrome located near the town of Holíč (2.5 km to the north-west of Holíč). VPD22 size: 1200×100 m.

1.11 Flight recorders

During the critical flight the glider was equipped with a NANO3 3251 flight recorder (the record of the flight was not saved in the device) and a Naviter Oudie 3 (X13-12056) recorder – the record of the flight was downloaded and assessed in Naviter See You.

1.12 Wreckage and impact information

Coordinates of the accident site: N 48°48'40", E 017°08'08".



1.13 Medical and pathological information

The air traffic manager of Aeroklub Holíč alerted the rescue units immediately.
The pilot had several injuries to his head, chest, spine and legs; he was conscious and transported by helicopter medical rescue service to the University Hospital Bratislava Kramáre/Hospital of the Academician Ladislav Dérer.

1.14 Fire

None.

1.15 Survival aspects

It was not necessary to perform any investigation and rescue by SAR equipment.

1.16 Tests and research

N/A.

1.17 Organizational and management information

Flight activities were performed in accordance with aviation regulations valid in the territory of the Slovak Republic and with local rules.

1.18 Additional information

After the occurrence the Committee checked the control elements of the glider and the attachment of the rope to the glider with the function of automatic disconnection of the rope locker during the take-off and no malfunctions were identified.

1.19 Useful or effective investigation techniques

Common investigation methods were applied.

2. ANALYSIS

Pilot activity

Winch-assisted launches bring certain risks which are considerably greater than in the case of aero tow launches. Pilots need to be aware of a faster sequencing of individual take-off phases and of ground proximity.

The pilot was performing a winch-assisted take-off after a long break, which might have affected the course of the take-off with the particular glider type.

Before the take-off the pilot performed all mandatory actions and gave a take-off readiness instruction.
After the rope was stretched, he started to perform the take-off itself. As the glider was starting to climb, the pilot made the glider climb too steeply by excessively pulling the elevator stick. This led to an immediate loss of forward speed and loss of control of the glider, with it subsequently falling on VPD22 with its right wing.

3. CONCLUSIONS / Causes of the air accident

3.1 Findings

Pilot

- According to the submitted documentation, the pilot had valid qualifications for performing flights with the particular category of gliders;
- The pilot had sufficient flight experience in performing flights with the particular glider type;
- On the date in question the pilot was performing his first winch-assisted take-off after a long break;
- At the time of the air accident the pilot was not under the influence of alcohol which could have affected his attention during the flight.

Glider

- The glider had valid documentation and did not demonstrate any malfunction before the air accident;
- It complied with the airworthiness conditions.

3.2 Causes of the air accident

After take-off, the glider started climbing steeply, which led to loss of control of the glider and its subsequent fall on VPD22 with its right wing.

4. SAFETY RECOMMENDATIONS

Based on the safety investigation of the causes of the air accident

which occurred on 12 May 2018, the Aeroklub HOLÍČ o.z. has taken its own measures:

1. **Standard Cirrus** gliders cannot perform winch-assisted take-offs.

2. Every year before the start of the season or before a winch-assisted solo flight in a single seat glider, pilots must perform 4 winch-assisted launches with an instructor.

   The above-stated measure is recommended also for pilots performing flights with gliders at LZHL which are not owned by Aeroklub HOLÍČ o.z..

In Bratislava, 13/07/2018