

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



AVIATION AND MARITIME INVESTIGATION AUTHORITY
Námestie slobody 6, P.O.BOX 100
810 05 Bratislava 15

FINAL REPORT

from expert investigation of an air accident
of a glider, type **STANDARD CIRRUS 75**
identification number **OM-0601**

Reg.No.: **SKA2016006**

The expert investigation of the occurrence was conducted pursuant to § 18 of the Act No. 143/1998 on Civil Aviation (the Aviation Act) and on amendments and supplements to certain acts, in accordance with the Regulation (EU) No 996/2010 of the European Parliament and of the Council on the investigation and prevention of accidents and incidents in civil aviation, which regulate investigation of accidents and incidents in civil aviation.

The Final Report has been issued in accordance with the L 13 Regulation which transposes provisions of the ANNEX 13, Aircraft Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of the expert investigation is to find out causes of the occurrence and prevent such occurrences from happening, rather than pointing out to guilt or responsibility of persons.

The present Final Report, its individual parts or other documents related to expert investigation of the occurrence have only an informative nature and cannot be used otherwise than as recommendation for performance of measures which would prevent other occurrences with similar causes from happening.

A. INTRODUCTION

Operator / Owner:	Slovak National Aeroclub / Aeroclub Martin
Operation type:	general aviation / sport and recreational flying
Glider type:	Standard Cirrus 75
Identification number:	OM-0601



Take-off site:	aerodrome Martin / LZMA
Flight stage:	local thermic flight
Accident scene:	to the north-east of Sklabinský Podzámok, Martin district N 49°03'25", E 019°02'09"
Accident date and time:	20 August 2016, 12 h 52 min

Note: All time data contained in the present Report is UTC time.

B. INFORMATIVE SUMMARY

On 20 August 2016, during a flight day of a Czech glider pilots training at LZMA, a pilot of a glider type Standard Cirrus 75, identification number OM - 0601 (hereinafter referred to as the "Cirrus glider"), while performing a local thermic flight in "Katova skala", located to the north-east of Sklabinský Podzámok, was making a left turn towards a slope at low altitude, when the Cirrus glider stalled and fell into a left spin, falling among trees.

The following committee has been established to investigate the causes of the air accident:

Lic. Jaroslava MIČEKOVÁ – leader of the expert investigation committee;
Miroslav GÁBOR – member of the expert investigation committee.

The Report has been issued by:

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

C. MAIN PART OF THE REPORT

1. FACTUAL INFORMATION
2. ANALYSES
3. CONCLUSIONS
4. SAFETY RECOMMENDATIONS

1. FACTUAL INFORMATION

1.1 History of the flight

The pilot performed a thermic flight from the LZMA aerodrome without a previously determined flight plan or route. Approximately after 1 hour and 40 minutes of thermic flying, prevailing to the south of the aerodrome, he returned to the aerodrome to the "Katova skala" location, 6 km to the east of LZMA.

In the above-stated location the pilot observed a different glider of the Janus type, flying eastwards, and he decided to fly behind it in the distance of approximately 500 m. At the altitude of about 80 m above tree-tops the pilot saw the Janus glider turning round at the end of "Katova skala" in the eastern part and flying back westwards in the opposite direction. The pilot decided to avoid it to the left, towards the slope, while he got below the level of the mountain ridge. Nearing to the slope, the pilot increased the left roll even more, while he stalled and fell into a left spin.

The Cirrus glider fell among trunks of broad-leaved trees. The pilot did not suffer any serious injuries during the fall.

In their witness reports, the crew of the Janus glider stated that at the time of slope flying in the "Katova skala" location, they did not see any other aircraft in the location, nor did they have any information thereof from radio communication (at the time of the occurrence, the Janus glider was flying opposite the sun and was located above the Cirrus glider).

The air accident was reported by the glider operator to the Aviation and Maritime Investigation Authority of the Ministry of Transport, Construction and Regional Development of the Slovak Republic.

Daytime: day
Flight rules: VFR

1.2 Injuries to persons

Injury	Crew	Passengers	Other persons
Fatal	-	-	-
Serious	-	-	-
Minor	-	-	-
No injuries	1	-	-

1.3 Damage to the glider

The glider was damaged during the air accident:

- broken right wing
- major damage to the left wing
- broken tail section
- destroyed cabin.





1.4 Other damage

The Aviation and Maritime Investigation Authority has not been reported any circumstances as a result of which third persons might claim compensation of damage.

1.5 Personnel information

Pilot:

citizen of the Czech Republic, aged 23;
holder of a GPL license, issued by CAA Czech Republic on 29 July 2015.

Qualifications:

Sailplane: examination date 17 July 2015, validity – no time restriction

Flight experience:

Total flight hours: 135 hours and 201 take-offs

Class 2 medical certificate, valid until 13 March 2020.

1.6 Glider information

Type: Standard Cirrus 75
Identification number: OM-0601
Serial No: 699
Manufacture year: 1977
Manufacturer: SCHEMPP-HIRT, Flugzeugbau GmbH/SRN

Total flight hours since manufactured: 1840 h 09 min and 997 flights.

Certificate of airworthiness No. 0640 issued by the Civil Aviation Authority of SR on 4 June 2008.

Airworthiness verified on 11 April 2016, with validity until 17 April 2017.

1.7 Meteorological information

Clear, cloudiness 3/8-4/8, visibility over 10 km.

1.8 Aids to navigation

NA

1.9 Communications

NA

1.10 Aerodrome information

NA

1.11 Flight recorders

Flight recorder (FR), type approved by IGC FAI for confirmation of glider performances.

1.12 Wreckage and impact information

The glider fell onto a mountainous terrain with trees, approximately 20-25 m high.



1.13 **Medical and pathological information**

Except for minor scratches, the pilot did not complain about any pain and no serious injuries were observed; he was transported to the hospital for a medical examination.

1.14 **Fire**

Did not occur.

1.15 **Survival aspects**

It was not necessary to perform search and rescue using SAR equipment.

1.16 **Tests and research**

It was not necessary to perform any tests or expert examination of glider parts.

1.17 **Organizational and management information**

Flight activities were performed in harmony with aviation regulations valid in the territory of the Slovak Republic and internal rules of the Aeroclub Martin.

1.18 **Additional information**

The pilot undertook a breath alcohol test with a negative result.

1.19 **Useful or effective investigation techniques**

Common investigation forms were used.

2. ANALYSIS

2.1. **Pilot activities**

Glider flying in a mountainous terrain requires excellent knowledge of local weather influences as well as correct responses to any non-standard situations occurring in the case of two and more gliders flying in the same area.

The pilot of the Cirrus glider evaluated the situation with the Janus glider flying in the opposite direction so that he performed an avoidance manoeuvre by making a left turn towards the slope, but at the time of the accident he had a sufficient manoeuvring space to perform the avoidance manoeuvre by a gentle push with a right turn off the slope, which would enable him to gain sufficient altitude and speed to continue flying safely. The above-stated manoeuvre would be in harmony with flight rules obliging pilots to avoid to the right side.

After performing the left avoidance manoeuvre the pilot lost altitude, probably as a result of minimum speed, and got below the level of the hill ridge. Nearing to the slope, he tried even harder to turn left by increasing the roll, which caused the Cirrus glider to fall into a left spin.

3. CONCLUSION / Cause of the air accident

3.1 Findings

Pilot

- according to the submitted documentation, the pilot had valid qualifications for performing flights in the particular aircraft category;
- at the time of the air accident, he was not under influence of alcohol, drugs or common pharmaceuticals which may have decreased his awareness during the flight.

Glider

Had valid documentation and did not demonstrate any malfunction prior to the air accident.

3.2 Causes of the air accident

- incorrectly chosen avoidance manoeuvre;
- flying low above the wooded mountainous terrain;
- stall and subsequent fall of the Cirrus glider into a spin.

3.3 Contributing causes of the air accident

Insufficient practical experience of the pilot with dealing with and foreseeing non-standard situations, also with regard to the total number of his flight hours.

4. SAFETY RECOMMENDATIONS

The Final Report from investigation of the air accident does not contain any recommendations.

In Bratislava, 7 November 2016