



**MINISTRY OF TRANSPORT,  
CONSTRUCTION AND REGIONAL DEVELOPMENT  
OF THE SLOVAK REPUBLIC**

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

**Reg. No: SKA2010019**

**FINAL REPORT**

on investigation of an air accident  
of aircraft type **CESSNA 172 S**  
registration No. **OM-AKT**

Date: 12.08.2010

Place: LZMA

## A. INTRODUCTION

The investigation of 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 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 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: AIR CARPATIA, s.r.o., Slowackého 24, 821 04 Bratislava  
Owner: AV-TEAM, s.r.o., Mierová 179, 821 05 Bratislava  
Type of aircraft: CESSNA 172 S  
Registration No: OM-AKT



Take-off site: LZDB  
Landing place: LZDB  
Flight phase: intermediate landing at LZMA  
Date and time of accident: 12.08.2010, 08:56 hrs.

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

## **B. INFORMATIVE SUMMARY**

On 12 August 2010 the crew with leased aircraft Cessna 172 S, registration No. OM-AKT, conducted a competitive navigation flight from the Dubnica nad Váhom Airport ("LZDB") and back with intermediate landing at the Martin – Tomčany Airport ("LZMA").

During the intermediate landing at LZMA the aircraft hard landed on the runway from a height of approximately 2 m.

The crew terminated the competitive flight at LZDB.

The crew of aircraft was not injured.

The following persons were appointed as investigators of the air accident:

Ing. BENEK Igor

Lic. MIČEKOVÁ Jaroslava

The report is issued by:

Air Accident and Incident Investigation Board  
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 August 2010, during the 17<sup>th</sup> FAI World Rally Flying Championship, the Russian crew with leased aircraft with identification number OM-AKT conducted a competitive navigation flight with touch and go at LZMA with the task "precision landing in the marked area".

The final approach phase was implemented at a very low speed with aircraft considerably „extended“ above the horizon. After chopping the throttle to idle run position the aircraft was overflared and then started wing stalling to the right.

The aircraft hard landed from the height of approximately 2-3 m on the right wheel of the main landing gear, and then it landed simultaneously on the left wheel of the main landing gear and the nose landing gear.

The aircraft crew did not realize that the aircraft was damaged due to hard landing in the marked area and after the touch and go landing it continued the flight toward LZDB.

The aircraft crew was informed about potential damage to the landing gear and in the next flight phase it continued the flight outside competition. For this reason the organiser declared the state of alert at LZDB.

The crew with aircraft landed at LZDB without further damage.

The crew was not injured.

Daytime: Day

The organiser of the competition reported the air accident to the Air Accident and Incident Investigation Board.

## 1.2 Injuries to persons

Injury	Crew	Passengers	Other persons
Fatal	-	-	-
Serious	-	-	-
Minor	-	-	-
None	2	-	-

## 1.3 Damage to aircraft

The aircraft suffered a small-scale damage due to the air accident.

The inspection of the aircraft carried out by a technician detected the following damages:

- Corrugated skin between the front door frame (wing strut) of the right pilot and attachment of the right MLG
- Deflected tube of right-hand landing gear and deformed covering in the area of the right-hand landing gear riser
- Broken (plastic) aerodynamic cover of vertical rudder
- Deflected end (approx. 2 cm) of the right horizontal rudder
- Depressed covering of body
- Broken bracing of the right-hand elevator.





#### 1.4 Other damages

The Air Accident and Incident Investigation Board was not informed about circumstances with potential claims for compensation of other damages toward a third party.

## 1.5 Personnel information

### **Aircraft commander – pilot:**

Citizen of the Russian Federation, aged of 49.

Holder of the aviation personnel licence (private pilot licence)/ PPL(A) N°000404, issued by the Air Transport Department of the Russian Federation on 30 September 2002.

Qualifications: SEP(L) with marked validity until 28 October 2011  
Medical certificate of 2<sup>nd</sup> class with marked validity until 28 October 2010.

### Flying experience:

Total number of flying hours: 421 h 09 min and 1,242 flights

### **Navigator - pilot:**

Citizen of the Russian Federation, aged of 55.

Holder of the aviation personnel licence (commercial pilot licence) / CPL(A) N°004826, issued by the Federal Aviation Authority of the Russian Federation, with marked validity until 28 October 2010.

Medical certificate of 1<sup>st</sup> class valid until 28 October 2010.

### Flying experience:

Total number of flight hours: 5856 h 28 min and 19314 flights as at 10.07.2010

## 1.6 Aircraft information

### a) **Airframe**

Type: CESSNA 172 S, registration No: OM-AKT

Serial No: 172S8456, year of manufacture: 2000

Manufacturer: CESSNA AIRCRAFT COMPANY, WICHITA, USA

Total number of flight hours from year of manufacture: 2356 h 45 min and 1839 flights as at 14 June 2010.

Certificate of airworthiness No: 0893/02, issued by the Civil Aviation Authority of SR on 24 September 2009, with marked validity until 23 September 2010.

### b) **Engine**

Type: LYCOMING, Serial No: L-28918-51A, model: IO-360L2A

Manufacturer: TEXTRON Lycoming, USA

### c) **Propeller**

Type: McCAULEY, Serial No: 1A17OE/JHA7660

Manufacturer: McCauley Propeller Systems, Wichita, USA

### d) **Weight of aircraft at the time of air accident:**

The weight of aircraft at the time of air accident was within the permitted range.

## 1.7 Meteorological information

Not applicable.

## 1.8 Aids to navigation

The aircraft was equipped for VFR flights.

## 1.9 Communications

The aircraft was equipped by radiostation enabling a two-way communication with all air stations at any moment of flight.

### **1.10 Aerodrome information**

LZMA is a public domestic aerodrome with irregular operation, situated 2 km east of the centre of Martin. Grass runway RWY 18L / 36R is used for aircraft operation, that was suitable for the critical flight at the time of air accident.

### **1.11 Flight recorders and other recording systems**

The aircraft was not equipped by flight recorders.

### **1.12 Wreckage and impact information**

Not applicable.

### **1.13 Medical and pathological information**

Not applicable.

### **1.14 Fire**

Not applicable.

### **1.15 Survival aspects**

Search and rescue using SAR devices were not required.

### **1.16 Tests and research**

Not applicable.

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

Not applicable.

### **1.18 Additional information**

Not applicable.

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

Standard investigation methods were used.

## **2. ANALYSIS**

2.1 In the final phase of the touch and go landing at LZMA the pilot landed at a very low landing speed and with large incidence angle of aircraft extension above the horizon. After chopping the throttle to idle run position, the pilot overflared the aircraft which ended by wing stalling of the aircraft, approximately from the height of 2-3 m, with hard landing on the right wheel of the right-hand landing gear, followed by simultaneous landing on the left wheel of main landing gear and on the nose landing gear.

At the time of air accident the pilot was not under influence of alcohol, narcotics or common drugs likely to decrease his attention during flight.

2.2 The crew had valid qualifications for performance of the critical flight.

2.3 Nobody was injured in this air accident.

2.4 Before the flight the aircraft fulfilled the conditions of airworthiness.

2.5 The aircraft suffered small-scale damage in the accident.

### **3. C O N C L U S I O N S / Cause of air accident**

- poor mastering of flying technique by the crew
- overflaring and wing stalling of the aircraft, followed by hard landing.

### **4. SAFETY RECOMMENDATIONS**

The organiser of the competition adopted the following preventive measures:

- the aircraft crew was disqualified from the competition after the flight
- a post-flight analysis of the accident with pilots participating in the competition was conducted before they continued the competitive flights.

Bratislava, 17.12.2010