



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

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

Reg. No.: SKS2011001

## FINAL REPORT

on investigation of serious incident

landing on occupied RWY

Date 03.04.2011

Place: airport Žilina / LZZI

## A. INTRODUCTION

The investigation of air accident, serious incident, 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) of the European Parliament and of the Council No. 996/2010 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 Air Accident and Incident Investigation to the Convention on International Civil Aviation.

The exclusive aim of investigation is to establish causes of accident, serious 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 the air accident in question have an 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.

## ABBREVIATIONS

Abbreviation	Slovak meaning/English meaning
AD	Airport / Aerodrome
AIP	Letecká informačná príručka / Aeronautical information publication
ATS	Letové prevádzkové služby / Air traffic services
C152	Skratka v kóde ICAO pre lietadlo Cessna A152 / Abbreviation in ICAO code for aircraft Cessna A152
CTR	Riadený okrsok / Control zone
ENR	Traťový / En route
ES TWR	Vedúci zmeny TWR / Executive supervisor of TWR
LDA	Použiteľná dĺžka pristátia / Landing distance available
LMU	Letecká mimoriadna udalosť / Occurrence
LPP	Letecké prevádzkové plochy / Aircraft manoeuvring areas
LPS SR, š.p.	Letové prevádzkové služby Slovenskej republiky, štátny podnik / Letové prevádzkové služby Slovenskej republiky, state enterprise
LZDB	Skratka v kóde ICAO pre letisko Dubnica / Abbreviation in the ICAO code for the airport Dubnica
LZZI	Skratka v kóde ICAO pre letisko Žilina / Abbreviation in the ICAO code for the airport Žilina
PC	Neradarový riadiaci letovej prevádzky/ Planner Controller
PPL(A)	Preukaz spôsobilosti súkromného pilota letúnov / Private pilot licence
SEP(L)	Kvalifikácia – jednomotorový piestový / Single engine piston
SZZ	Svetlotechnické zabezpečovacie zariadenia / light safety equipment
RWY	Vzletová a pristávacia dráha / Runway
THR	Prah dráhy / Threshold of Runway
TMA	Koncová riadená oblasť / Terminal control area
TWR	Letisková riadiaca veža alebo letisková služba riadenia/ Aerodrome control tower or aerodrome control
TWY	Rolovacia dráha / Taxiway
UTC	Svetový koordinovaný čas / Co-ordinated Universal Time
VFR	Flight rules za viditeľnosti / Visual flight rules
VI	Vážny incident / serious incident

Operator / Owner: Vladimír Hrabec - AEROFATRA  
Type of operation: general aviation  
Type of aircraft: Cessna A152  
Registration No.: OM - AFB  
Take-off site: LZDB  
Landing site: LZZI  
Flight phase: landing  
Place of serious incident: LZZI / RWY 24  
Date and time of detection of incident: 03.04.2011, 17:00 hrs

Note: All time data in this report are stated in co-ordinated universal time UTC.

## **B. INFORMATIVE SUMMARY**

On 03.04.2011 the pilot with aircraft Cessna A152, registration No. OM – AFB, made a landing on occupied RWY 24 at the Airport LZZI. Inspection of RWY using the airport maintenance means was conducted at that time.

An investigation commission for investigation of causes of the serious incident was set up, composed of the following members:

Lic. Jaroslava Mičková	chairman of investigation board
Ing. Jozef Tóth	member of investigation board
Ing. Igor Jandura	member of investigation board.

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 03.04.2011 the operating hours of the Airport LZZI were published by reports NOTAM C396/11 and C397/11, between 17:00 hrs and 22:00 hrs. Out of the published operating hours, the controlled airspace of class G CTR and TMA Žilina is changed to uncontrolled airspace of class G, based on information provided in the respective chapters of AIP SR.

The flight of aircraft with registration No. OM - AFB was made from the Airport LZDB to the Airport LZZI out of the operating hours without provision of ATS service. The flight was conducted according to the VFR rules.

The pilot of the aircraft used the frequency Žilina PREVÁDZKA – 122.60 MHz on two occasions and transmitted his position and purpose of flight blind. A few seconds before the start of provision of the ATS service the pilot of aircraft OM - AFB used the frequency of TWR Žilina – 124.150 MHz and PC TWR Žilina taking up his duty informed him that operating times would start within one minute and that he would establish radio contact with the crew. The pilot was instructed that inspection of RWY is under way and that he should wait in the downwind position. The pilot did not answer on the frequency of TWR Žilina (124.150 MHz) and did not use the frequency of Žilina PREVÁDZKA (122.60 MHz) either.

At 17:02 hrs the pilot of aircraft OM - AFB made a landing on RWY 24 without radio communication with TWR Žilina. At that time ATS services had been provided for 2 minutes, about which pilots were properly informed on the operating frequency of TWR Žilina and on the frequency of Žilina PREVÁDZKA.

At that time a vehicle making inspection of RWY and SZZ was present on RWY 24/01. According to a witness statement and notification of incident in air traffic, this vehicle was located in the area of THR RWY 06.

The aircraft OM - AFB landed on an occupied runway used by a vehicle making inspection of RWY and SZZ. The driver of this vehicle had a radio contact with TWR Žilina on frequency 121.7 MHz. PC TWR Žilina did not order the driver to leave RWY.

On 3 April 2011 the serious incident was reported to the Air Accident and Incident Investigation Board of the Ministry of Transport, Construction and Regional Development of the Slovak Republic.

Daytime: day

## 1.2 Injuries to persons

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

## 1.3 Damage to aircraft

Not applicable.

## 1.4 Other damages

The Air Accident and Incident Investigation Board was not informed about circumstances with potential application of claims for compensation of damage towards a third party.

## 1.5 Personnel information

Citizen of the Slovak Republic, aged of 56, holder of the pilot licence PPL(A) No. SK 02100032, issued by the Civil Aviation Authority of SR on 14.04.2010.

### Qualifications:

SEP(L) with marked validity until 30.04.2012.

Medical certificate of 2nd class with marked validity until 28.01.2012.

## 1.6 Aircraft information

### a) Airframe

Type: CESSNA A152  
Serial No.: A1520935  
Year of manufacture: 1980  
Manufacturer: CESSNA AIRCRAFT COMPANY, WICHITA/USA

Certificate of airworthiness No.: 1035/01, issued on 14.07.2010 with marked validity until 14.07.2011.

### b) Engine

Type: O-235-L2C  
Serial No.: L-2084715  
Year of manufacture: 1980

### c) Propeller

Type: 72CK-56-0-54  
Serial No.: K-8869  
Year of manufacture: 2005

## 1.7 Meteorological situation

METAR LZZI 031700Z 26005KT CAVOK 15/06 Q1014=

## 1.8 Aids to navigation

Not applicable.

## 1.9 Communications

The aircraft was equipped by radio communication system enabling two-way radio communication at every moment of flight with all air stations. Based on correspondence records the radio and telephone communication was legible and good.

## 1.10 Information on take-off site

Not applicable.

## 1.11 Flight recorders and other recording systems

The aircraft was not equipped by flight recorders.

The radio telecommunication recorder NICELog was in regular operation and applicable for documentation purposes.

## 1.12 Wreckage and impact information

The Airport LZZI is an international airport. Asphalt RWY 06/24 with landing distance available (LDA) of 1,150 m and width of 30 m is used for aircraft operation. It was operable on the day of serious incident.

## 1.13 Medical and pathological information

Not applicable.

#### 1.14 **Fire**

No fire broke out.

#### 1.15 **Survival aspects**

Not applicable.

#### 1.16 **Tests and research**

There was no need for performance of tests and research beyond standard basic research methods.

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

The aircraft operator is a company that holds the licence for operation of specified flights.

The body for provision of air traffic services is a company that holds valid certificate.

#### 1.18 **Additional information**

##### **A) NOTAM C0396/11; C0397/**

**C0396/11** from: 1104010300 to: 1104302200EST Aerodrome

E) OPERATING HOURS OF THE AIRPORT ARE CHANGED AS FOLLOWS:

MON - FRI 0300-0400 0600-1400 1700-2200, SAT 0300-0400,

SUN 1700-2200.

**C0397/11** from: 1104010300 to: 1104302200EST TMA

E) OPERATING HOURS OF ATS, CTR ZILINA AND TMA ZILINA

ARE CHANGED AS FOLLOWS:

MON - FRI 0300-0400 0600-1400 1700-2200, SAT 0300-0400,

SUN 1700-2200.

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

Standard methods of investigation into causes of the serious incident with use of voice records, information in submitted reports, reports of LPS. š.p., data from the register of aircraft and aviation personnel and witness statements.

## 2. ANALYSIS

### 2.1 Activity of the pilot

The pilot of aircraft stayed in the area of uncontrolled airspace of class G until 17:00 hrs and reported his position on frequency of Aeroklub Žilina 122,60 MHz. The pilot followed the procedures of AIP SR.

At 16:59:11 the pilot reported his position on frequency of TWR Žilina 124.150 MHz and was ordered by PC TWR Žilina to wait downwind, for the reason of ongoing runway inspection. He did not confirm this information. Afterwards, at 16:59:48, he reported his position on frequency 122.60 MHz (Aeroklub Žilina). Nobody answered to him on this frequency. This fact was also confirmed by the statement of the pilot of aircraft that he reported his entry into the zone of Airport LZZI (position Považská Bystrica) on frequency 122.60 MHz. The transmission was without reaction, so he changed to frequency 124.150 MHz, where he again reported his position in anticipation of answer seeing that something was going on at the airport, because he saw blinking landing lights and a vehicle moving on the runway.

From 17:00 hrs the airspace of CTR/TMA LZZI was a controlled airspace of class D and class E. The pilot of aircraft OM - AFB was in the controlled airspace of class D, CTR LZZI, without permanent two-way radio communication with TWR Žilina and without required landing clearance.

From the time analysis of the last phase of flight of aircraft OM - AFB, description of the event in the report on the event in air traffic submitted by the air traffic controller of Žilina tower and statement of the pilot of aircraft OM – AFB it results that the pilot of aircraft OM- AFB continued the landing on RWY 24, where he landed at 17:02 hrs, although he had not obtained the landing clearance and had known about the obstacle formed by a vehicle on RWY 24.

### 2.2 Activity of controller

**2.2.1** PC TWR Žilina transmitted at 16:59:57 h on frequency 124.150 MHz (TWR Žilina) and at 17:00:24 h on frequency 122.60 MHz (Aeroklub Žilina) information about the start of provision of the ATS service and the requirement for change to frequency 124.150 MHz. Afterwards he tried to establish communication with the pilot of aircraft OM – AFB on four occasions: twice on frequency 124.150 MHz (TWR Žilina) and twice on frequency 122.60 MHz (Aeroklub Žilina). All attempts failed. The pilot of aircraft OM - AFB did not answer.

After five unsuccessful calls PC TWR Žilina could assume an emergency, or at least a communication failure, and ensure a free runway and emergency landing strip and provide all possible support to the aircraft crew.

PC TWR Žilina did not implement adequate measures to prevent a collision of the aircraft with the vehicle on occupied runway.

**2.2.2** PC TWR Žilina used frequency 122.60 MHz with a good intent. The Agreement on cooperation in use of airspace CTR/TMA LZZI between TWR Žilina and Aeroklub Žilina does not specify the method and frequency 122.60 MHz – Žilina PREVÁDZKA used by TWR Žilina.

The Agreement on cooperation in use of airspace CTR/TMA LZZI between TWR Žilina and Aeroklub Žilina has been in force since 2003 and its content does not meet present requirements for air traffic control and coordination.

The Airport LZZI has grass RWY 06/24 that currently serves as emergency strip. The use of this grass runway and of the emergency strip is not explicitly defined for ATC TWR Žilina.

The Regulation on service on the TWR Žilina provides that the workplace of PC is equipped by a signalling lamp that transmits visual light signals to the aircraft, which would mean to the pilot „the airport is unsafe, do not land“.

If PC had performed this activity at the critical moment, he would not have been able to provide ATS services in full extent. He was the only controller in duty on TWR Žilina and had to communicate on different frequencies and monitor aircrafts on the aerodrome circuit and the obstacle on runway.

### **3. CONCLUSIONS / CAUSE OF SERIOUS INCIDENT**

#### **3.1 Findings**

- the pilot of aircraft with identification No. OM - AFB did not answer multiple calls from PC TWR Žilina on operating frequency of Žilina VEŽA – 124.150 MHz and Žilina PREVÁDZKA – 122.60 MHz.
- the pilot did not implement the procedures applicable in case of communication failure, when he had not obtained the landing clearance.
- the pilot saw that RWY 24 was occupied, but he continued the flight on the aerodrome circuit RWY 24 and landed on a runway occupied by a vehicle without landing clearance.
- at the time of approach and landing of aircraft OM – AFB PC TWR Žilina left the vehicle Žilina 1 on runway 24 that maintained radio communication and created an obstacle to the landing aircraft.
- after five unsuccessful calls PC TWR Žilina could assume an emergency, or at least a communication failure, and ensure a free runway.
- PC TWR Žilina used the frequency of Žilina PREVÁDZKA – 122.60 MHz without rules agreed with the operator of this frequency Žilina Aeroklub.
- the use of signalling lamp for transmission of visual light signals is not always possible when TWR Žilina, position of PC, is manned by a single air traffic controller.
- The Agreement on cooperation in use of airspace CTR/TMA LZZI between TWR Žilina and Aeroclub Žilina is not updated, i.e. it does not meet the actual needs of air traffic control and coordination between two entities.

#### **3.2 Causes of serious incident:**

##### **Main cause of serious incident:**

- landing on occupied RWY.

##### **Contributing causes:**

- flight of aircraft at transition from uncontrolled to controlled airspace
- the controller should have proceeded in the same way as in case of communication failure
- the pilot of aircraft should have implemented procedures as in case of flight without communication.

## 4. SAFETY RECOMMENDATIONS

On the basis of investigation of causes of the serious incident involving:

Aircraft type: **Cessna 152**

Registration No. **OM - AFB**

Date of incident: **03.04.2011**

We recommend the Civil Aviation Authority of the Slovak Republic to adopt the following measures:

- to analyse the serious incident with the Air Traffic Services Unit of the Airport LZZI, putting stress on the flight procedures for transition from uncontrolled to controlled airspace,
- to harmonise the use of frequencies TWR Žilina-124.15 MHz and Žilina PREVÁDZKA-122.6 MHz,
- to analyse the serious incident with the pilot.

Bratislava, 31.08.2011