

MINISTRY OF CONSTRUCTION AND TRANSPORT

TRANSPORTATION SAFETY BUREAU

# FINAL REPORT

(English Language Summary)

Aero AT-3R100, HA-NAD  
Tököl Airfield (LHTL), 26 August, 2023

Accident  
2023-1178-4

**This is an English language abstract of the official safety report written in Hungarian.  
Final Reports are published at [www.kbsz.hu](http://www.kbsz.hu).**

The sole objective of a safety investigation is to find the causes and circumstances of aviation accidents or incidents and to initiate the necessary safety measures; furthermore, to make recommendations in order to prevent similar cases in the future. It is not the objective of an investigation to apportion blame or liability.

## Introduction

### Synopsis

Occurrence class	Accident	
Aircraft	Model	Aero AT-3R100
	Registration	HA-NAD
Occurrence	Date and Time	26 August, 2023, 16:45 LT
	Location	Tököl Airfield (LHTL)
Fatalities / Severe Injuries	No injuries	
Damage to Aircraft	Substantial Damage	

The pilot and the passenger arrived to Tököl Airfield (LHTL) for a leisure flight. The pilot obtained the necessary information and prepared the aircraft for the planned flight. During taxiing, the pilot received information from "Tököl Radio" about the wind direction and the recommended runway direction. Contrary to the received information, the pilot initiated take-off from runway 32 opposite to the recommended direction (14). During ascent, at a height of nearly 10 meters, the aircraft stalled, then its nose gear hit the ground, and after a slide of approximately 75 meters, the aircraft came to rest on the right side of the runway. The aircraft sustained significant damage in the accident, but there were no personal injuries.

The Investigating Committee of the Transportation Safety Bureau (hereinafter referred to as 'IC') attributed the occurrence of the accident to human factors. During the investigation, the IC concluded that the direct cause of the accident was the pilot increasing the aircraft's pitch angle after take-off to a critical value, causing the aircraft to stall. Additionally, the IC identified a contributing factor.

Such cases can be avoided by complying with the relevant rules and regulation. The IC of the TSB found no grounds to issue a safety recommendation.



Figure 1: Aircraft at the scene of the accident

## General information

All times indicated in this report are in local time (LT). LT at the time of the occurrence: UTC+2 hours.

Geographic locations throughout this document are provided by WGS-84 standard.

The capitalised positions used throughout this document (e.g. Captain, Pilot, etc.) refer to the particular persons concerned in the event investigated.

The format and content of this report is in harmony with Chapter 6 of Annex 13 of Act XLVI of 2007 promulgating the Appendices to the Convention on International Civil Aviation, signed in Chicago on 7 December 1944. Appendix, as well as with the requirements set out in ICAO Doc 9756 Part IV.

## Reports and Notifications

The occurrence was reported to TSB's call center at 16:55 on 26 August 2023, by the representative of the aviation safety organization of the operator.

In line with Article 9, Section (2) of Regulation (EU) No 996/2010 of the European Parliament and of the Council, TSB of Hungary notified the following organisations.

- EASA on 28/08/2023 at 16:30.
- Accident Investigation Authority of the other states involved on 28/08/2023 at 16:34. (Portugal)
- Accident Investigation Authority of the State of Manufacture on 28/08/2023 at 16:35.
- Accident Investigation Authority of the other states involved on 28/08/2023 at 16:37. (Turkey)

The following of the notified foreign organisations appointed an accredited representative for the investigation.

- State of the Manufacture of the aircraft: Ministry of Infrastructure and Construction, State Commission of Aircraft Accident Investigation (Poland)

## Investigation Committee

The Head of TSB appointed the following persons in the investigating committee (hereinafter: IC).

Investigator-in-Charge	Gábor Erdősi	investigator
Member	Kitti Tompa-Dusnoki	investigator

Kitti Tompa-Dusnoki Government Official's employment by TSB was changed during the investigation and Zsuzsanna Nacsá jd. Investigator, was assigned by the head of TSB as Investigator-in-Charge (IIC) in replacement.

## Overview of the Investigation Process

Receiving event notification, the on-duty TSB supervisor mandated an immediate dispatch to the site.

The TSB classified the event as an accident due to the extent of the aircraft damage.

Pursuant to Article 5 of REGULATION (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/ECA the TSB is required to initiate an investigation in the following circumstances.

1. *Every accident or serious incident involving aircraft to which Regulation (EU) 2018/1139 of the European Parliament and of the Council applies shall be the subject of a safety investigation in the Member State in which the accident or serious incident occurred.*
2. *Where an aircraft to which Regulation (EU) 2018/1139 applies and which is registered in a Member State is involved in an accident or a serious incident the location of which cannot be definitely established as being in the territory of any State, a safety investigation shall be conducted by the safety investigation authority of the Member State of registration.*
3. *The extent of safety investigations referred to in paragraphs 1, 2 and 4 and the procedure to be followed in conducting such safety investigations shall be determined by the safety investigation authority, taking into account the consequences of the accident or serious incident and the lessons it expects to draw from such investigations for the improvement of aviation safety.*
4. *Safety investigation authorities may decide to investigate incidents other than those referred to in paragraphs 1 and 2, as well as accidents or serious incidents to other types of aircraft, in accordance with the national legislation of the Member States, when they expect to draw safety lessons from them.*
5. *By way of derogation from paragraphs 1 and 2 of this Article, the responsible safety investigation authority may decide, taking into account the expected lessons to be drawn for the improvement of aviation safety, not to initiate a safety investigation when an accident or serious incident concerns an unmanned aircraft for which a certificate or declaration is not required pursuant to Article 56(1) and (5) of Regulation (EU) 2018/1139, or concerns a manned aircraft with a maximum take-off mass less than or equal to 2 250 kg, and where no person has been fatally or seriously injured.*

Based on the findings of the site inspection and with regard to Article 5 (1) of Regulation (EU) No 996/2010 of the European Parliament and of the Council, the head of the TSB decided that an investigation is required and will be launched.

In the course of the investigation the IC has taken the following steps:

- conducted a site inspection and took photographs;
- obtained relevant documents related to the aircraft and its operation;
- interviewed witnesses;
- conducted an examination, jointly with a forensic expert appointed by the police, to justify or exclude the suspected technical malfunction during flight;
- obtained flight data stored by the aircraft's instruments;
- obtained meteorological data valid at the time of the incident;
- analyzed the collected data and information.

## **Investigation Principles**

**This investigation is being carried out by Transportation Safety Bureau on the basis of the following disciplines.**

- Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC,
- Act XCVII of 1995 on aviation,
- Annex 13 identified in the Appendix of Act XLVI. of 2007 on the declaration of the annexes to the Convention on International Civil Aviation signed in Chicago on 7th December 1944,

- Act CLXXXIV of 2005 on the safety investigation of aviation, railway and marine accidents and incidents (referred to as Kbv. throughout the document),
- NFM (Ministry for National Development) Regulation 70/2015 (XII.1) on safety investigation of aviation accidents and incidents, as well as on detailed investigation for operators,
- In matters not covered by Kbv., Act CL of 2016 on General Public Administration Procedures prevails.

The competence of the Transportation Safety Bureau of Hungary is based on Government Regulation № 230/2016. (VII.29.) on the assignment of a transportation safety body and on the dissolution of Transportation Safety Bureau with legal succession.

**Pursuant to the aforesaid legislation,**

- Transportation Safety Bureau of Hungary shall investigate aviation accidents and serious incidents.
- Transportation Safety Bureau of Hungary may investigate aviation and incidents which – in its judgement – could have led to accidents of more severe consequences in different circumstances.
- Transportation Safety Bureau of Hungary is independent of any person or entity that may have interests in conflict with the objectives of the investigating body.
- In addition to the aforementioned legislation, TSB of Hungary shall conduct safety investigations in line with ICAO Docs 9756 and 6920 Manual of Aircraft Accident Investigation.
- This Report shall not be binding, nor shall an appeal be lodged against it.
- The original of this report was written in Hungarian.

No conflict of interest has been identified between safety investigators appointed to the IC. Investigators assigned to a safety investigation shall not be involved as experts in any other procedure pertaining to the same case and shall refrain from doing so in the future.

The IC shall retain all data and information having come to their knowledge in the course of the safety investigation. Furthermore, the IC shall not be obliged to make such data and information available to other authorities, if their original owner could have legally refused disclosure.

This Final Report is based on the Draft Report prepared by the IC that was sent to all involved parties for comments, as set forth by the relevant regulations.

Within the legal deadline in response to the Draft Report, comments have been received articulating alternative opinions or interpretations. The IC prepared the final report by considering the comment received on the draft report as revised by parties involved.

## **Copyright**

This report has been issued by

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With the exceptions stipulated by law, this report or any part thereof may be used in any form, provided that context is maintained and clear references are made to the cited source.

**Translation**

This document has been translated from Hungarian. Although efforts have been made to provide a translation as accurate as possible, discrepancies between the versions might occur. In such eventuality, the Hungarian version shall prevail.

## Factual information

### Flight History

On the day of the incident, the pilot and the passenger arrived to Tököl Airfield shortly after 4:00 PM. According to both the passenger and the pilot, they had planned a 30-minute local pleasure flight. The pilot stated that after their arrival he obtained the necessary information for the flight from the operations center, including weather data. According to the pilot's account and notes, the atmospheric pressure was 1011 hPa, and the wind, without gusts, was blowing from 270 degrees at 7 knots. At the time of the event, internal procedures of the organization specified an upper temperature limit for the operation of aircraft at 33°C, and the maximum tailwind component was 5 knots.

After obtaining the relevant information, the pilot prepared the aircraft for the planned flight, then assisted their friend in the right seat to fasten the seatbelt before taking the left seat. After starting and checking the engine, the pilot performed the following checklist items. During taxi the pilot contacted "Tököl Radio," where he was informed that the wind was blowing from 170 degrees at 8 knots, and the recommended runway was RWY 14. Despite this information, the pilot opted for runway 32 and completed the before take-off checklist and also checked the deflection of the flight control surfaces.

Following this, the pilot initiated the take-off with a flaps setting of 15 degrees at take-off power. Due to the tailwind and to avoid a stall, the pilot estimated a speed of approximately 55 knots to raise the aircraft's nose (rotation). According to the pilot, the aircraft was already airborne at 45 knots with the control stick in the neutral position. At a height of a few meters, the pilot intended to accelerate to the prescribed speed of 70 knots but encountered resistance in moving the control stick forward due to its reported jamming. At approximately 10 meters in altitude, the aircraft stalled and after the steep descent its nose struck the ground. After a ground collision sequence, it skidded approximately 75 meters, and the aircraft came to rest in a severely damaged condition at the geographical coordinates of N 47.34124, E 018.98612 at 4:44 PM.

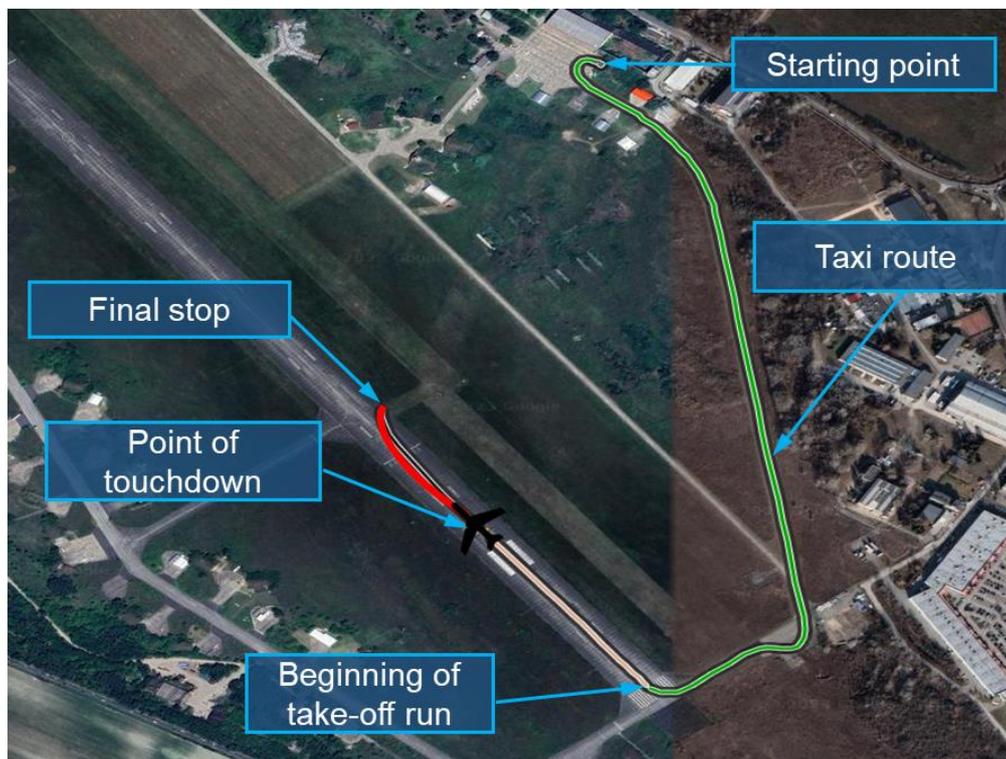


Figure 2. The route of the aircraft (Source of the image: Airwin)

## Conclusions

The IC, during the investigation concluded that the direct cause of the accident was the pilot increasing the aircraft's pitch angle after take-off to a degree that exceeded a critical value, leading to the stall of the aircraft.

As a contributing factor, the IC identified that the pilot did not plan and execute his flight task in accordance with the procedures, as evidenced by the pilot's failure to make the appropriate decision based on the available information.

Such cases can be avoided by complying with the relevant rules and regulation. The IC of the TSB found no grounds to issue a safety recommendation.

## Safety Recommendations

The IC issued no safety recommendation.

Dated in Budapest, on 29 February 2024