

AI2023-8

**AIRCRAFT SERIOUS INCIDENT
INVESTIGATION REPORT**

**Aero Asahi Corporation
J A 6 7 1 8**

December 21, 2023



The objective of the investigation conducted by the Japan Transport Safety Board in accordance with the Act for Establishment of the Japan Transport Safety Board (and with Annex 13 to the Convention on International Civil Aviation) is to prevent future accidents and incidents. It is not the purpose of the investigation to apportion blame or liability.

TAKEDA Nobuo
Chairperson
Japan Transport Safety Board

Note:

This report is a translation of the Japanese original investigation report. The text in Japanese shall prevail in the interpretation of the report.

《Reference》

The terms used to describe the results of the analysis in "3. ANALYSIS" of this report are as follows.

- i) In case of being able to determine, the term "certain" or "certainly" is used.
- ii) In case of being unable to determine but being almost certain, the term "highly probable" or "most likely" is used.
- iii) In case of higher possibility, the term "probable" or "more likely" is used.
- iv) In a case that there is a possibility, the term "likely" or "possible" is used.

AIRCRAFT SERIOUS INCIDENT INVESTIGATION REPORT

November 24, 2023

Adopted by the Japan Transport Safety Board

Chairperson TAKEDA Nobuo
 Member SHIMAMURA Atsushi
 Member MARUI Yuichi
 Member SODA Hisako
 Member NAKANISHI Miwa
 Member TSUDA Hiroka



Company	Aero Asahi Corporation
Type, Registration Mark	Aerospatiale AS355F2 (Rotorcraft) JA6718
Incident Class	Case equivalent to “Landing on an unassigned runway” Case equivalent to the item (ii), Article 166-4 of the Ordinance for Enforcement of the Civil Aeronautics Act of Japan (item (xviii) of same Article)
Date and Time of the Occurrence	At 09:03 Japan Standard Time (JST: UTC+9 hours), May 22, 2023
Site of the Serious Incident	Chubu Centrair International Airport

1. PROCESS AND PROGRESS OF THE INVESTIGATION

Summary of the Serious Incident	On Monday, May 22, 2023, when landing at Chubu Centrair International Airport, the helicopter landed at the take-off/landing field for helicopters (helipad) on a taxiway that was different from the runway assigned by the air traffic controller.
Outline of the Serious Incident Investigation	The Japan Transport Safety Board (JTSB) designated an investigator-in charge and two other investigators on May 22, 2023 to investigate this serious incident. Comments on the draft Final Report from parties relevant to the cause of the serious incident were invited. Comments from the relevant State were invited.

2. FACTUAL INFORMATION

Aircraft Information	
Aircraft type:	Aerospatiale AS355F2
Serial number: 5519	Date of manufacture: May 6, 1993
Airworthiness certificate: No.Dai-2022-339	Validity: September 8, 2023
Personnel Information	
Captain:	Age: 60
Commercial pilot certificate (Rotorcraft)	August 7, 1992

Specific pilot competence, Expiry of practicable period for flight	November 24, 2024
Type rating for multi-engine turbine land	July 21, 1993
Class 1 aviation medical certificate	Validity: September 13, 2023
Total flight time	8,053 hours 21 minutes
Flight time in the last 30 days	7 hours 56 minutes

Event Occurred and Relevant Information

(1) History of the Flight

At 08:30 on the day of the occurrence of the serious incident, the helicopter took off from Yao Airport for transporting personnel (pick-up) with the captain and a flight operation assistant (described later in (3)) on board and headed for Chubu Centrair International Airport (hereinafter referred to as “the airport”) under visual flight rules (VFR). At 08:56, at the position of approx. 10 nm (approx. 18.5 km) west of the airport, the helicopter requested the tower control position of Chubu Airport Traffic Control Tower (hereinafter referred to as “the Tower”) to provide instructions for landing. When the Tower instructed the helicopter to make a position report over “West Point” (approx. 6.0 nm (approx. 11.1 km) west of the airport), which is the visual reporting point* 1 , the helicopter soon made a position report to the effect that it was flying over “West Point” despite of its not having reached there yet. Upon receiving this report, the Tower thought the pilot of the helicopter was unfamiliar with the airport's operation and judged that it would be better for the helicopter to land on the runway visually recognizable more easily than at the helipad. At 08:58, when the helicopter flew passing over “West Point”, the Tower instructed the helicopter to make a position report at the position of 1 nm (about 1.9 km) west of the airport.



Figure 1: Estimated Flight / Taxiing Routes of the Helicopter

Visually recognizing the helicopter reaching approx. 2 nm (approx. 3.7 km) west of the airport, at 09:01, the Tower issued a landing clearance to the helicopter by transmitting more slowly than usual “RUNWAY 36, CLEARED TO LAND, NEARBY A8 ON THE ACTIVE” (Figure 1 ①). The captain read back and confirmed saying “ROGER. CLEARED TO LAND RUNWAY38*2, A7. CONFIRM A7?” The Tower replied “NEARBY A8.” The captain read back saying “A8, ROGER.”

After confirming that the helicopter reached over the vicinity of Runway 36, the Tower looked down at the air traffic control equipment terminal in order to input the landing time of the helicopter (Figure 1 ②). In the meantime, the helicopter crossed the runway near Taxiway A7 and headed toward T Helipad. A few seconds later, the Tower raised the eyes and visually recognized the helipad heading toward T Helipad (Figure 1 ③). Almost at the same time, the air traffic controller who was

*1 “Visual reporting points” refers to the points that are established for each airport and used by VFR aircraft entering the air traffic control zone for landing or other purposes to report its position in order to receive clearances or instructions from an air traffic controller.

*2 The runways at Chubu Centrair International Airport are “RUNWAY18” or “RUNWAY36”, but here it describes what the captain read it back actually.

next to the Tower and in charge of the ground control position advised the Tower that the helicopter had crossed the runway. After confirming that there was no other aircraft in the vicinity of T Helipad, at 09:03:14, the Tower called the helicopter saying, "YOU MISSED RUNWAY, AND YOU ARE LANDING AT T HELIPAD." The helicopter landed at T Helipad at 09:03:27 (Figure 1 ④).

(2) The Captain's Response

As the captain and flight operation assistant had no previous experience flying to the airport, they interviewed several pilots in the company to ask about the aerodrome control service at the airport in advance. As the result, the captain and flight operation assistant heard that aircraft would be always cleared to land at T Helipad at the airport, and did not expect to be cleared to land on the runway.

As it was not the instruction related to the downwind-leg and base-leg when the helicopter was instructed by the Tower to make a position report at the position of 1 nm west of the runway, the flight operation assistant thought that the next would be the instruction to cross the runway. When the Tower specified the "touchdown point (nearby Taxiway A8)" in addition to the landing clearance on Runway 36, the captain was unable to understand it promptly, but did not confirm it with the Tower, and interpreted as not being specified the "touchdown point" but being provided with supplementary information (the nearest taxiway) indicating the position of T Helipad. The flight operation assistant thought what had been specified by the Tower was not "touchdown point", but "the position to cross the runway" when heading toward T Helipad. In addition, both of them were unable to listen to the part, "ON THE ACTIVE", which were included in the landing clearance issued by the Tower. Thinking that the nearest taxiway for T Helipad was "Taxiway A7" rather than "Taxiway A8", the captain confirmed with the Tower by asking "Confirm Taxiway A7?" Even though the Tower told the captain again "Nearby Taxiway A8", the captain, who was piloting the helicopter assuming that it would land at T Helipad, did not notice it was specified the "touchdown point" for landing on Runway 36 to the last and landed the helicopter at T Helipad.

(3) "Flight Operation Assistant" in the Company

In principle, the company used to have a flight operation assistant on board to assist the captain at the time of operating at airports designated as requiring special safety cautions due to heavy traffic and other reasons. Flight operation assistants are required to have a pilot certification, but are supposed not to pilot the aircraft.

When the serious incident occurred, Chubu Centrair International Airport was not designated as those airports, however, considering the response to the passengers' need and others when transporting personnel, the company decided to have a flight operation assistant on board for this flight operation as well.

(4) ATC Phraseology concerning Landing Clearance

The III Standards for Air Traffic Control Procedures, Air Traffic Control Service Procedure Handbook set forth by the Civil Aviation Bureau (hereinafter referred to as "the ATC Standard"), stipulates that the landing clearance on a runway shall be issued after preliminarily issuing the runway number in-use (Example: RUNWAY36, CLEARED TO LAND.) On the other hand, for helicopters, the landing clearance at a take-off/landing field other than runways shall be issued before issuing the name of the take-off/landing field (Example: CLEARED TO LAND AT T HELIPAD.)

ATC phraseology concerning landing clearance described above and their difference (different word order) are also described in the AIM-J (Aeronautical Information Manual Japan) (Compiled by NPO AIM-Japan Editorial Association, Published by Japan Aircraft Pilot Association).

3. ANALYSIS

The JTSB concludes that when cleared to land on Runway 36 by the Tower, the captain most likely mistakenly believed that the helicopter was cleared to land at T Helipad, and it landed at the helipad.

The JTSB concludes that the captain mistakenly believed that it was cleared to land at T Helipad was probably because while the Tower considered that the pilot of the helicopter seemed to be unfamiliar with the airport's operation and issued a clearance for landing on the runway visually recognizable more easily for the helicopter, the captain assumed that it would never be cleared to land on the runway at the airport based on the information obtained in advance. The Tower issued the landing clearance on Runway 36 after preliminarily issuing the runway number in-use according to the ATC Standard. Therefore, if the captain correctly recognized the ATC phraseology difference between the landing clearances issued for a runway and a helipad, the incorrect assumption could probably have been corrected. Besides, the captain was unable to understand the part of transmission contents from the Tower, however, by requesting the Tower to transmit again the captain could possibly have noticed that it was cleared to land not at the helipad but on the runway.

The JTSB concludes that in order not to misunderstand ATC instructions and clearances due to an incorrect assumption, it is important for pilots to acquire sufficient knowledge related to ATC phraseology and correctly recognize the transmission contents from air traffic controllers. In addition, when they do not understand the transmission contents, if any, they should not hesitate but promptly confirm it.

4. PROBABLE CAUSES

The JTSB concludes that the probable cause of this serious incident was that when the helicopter was cleared to land on Runway 36 by the Tower, the captain most likely mistakenly believed that it was cleared to land at T Helipad and it landed at the helipad.

5. SAFETY ACTIONS

(1) Safety Actions Required

As indicated in the ANALYSIS, it is important for pilots to acquire sufficient knowledge related to ATC phraseology and correctly recognize the transmission contents from air traffic controllers.

(2) Safety Actions Taken after the Serious Incident

The company took the following measures in the wake of this serious incident.

- They provided all pilots with the education to remind them of ATC phraseology related to “The Clearance for Helicopters to Land at Take-off/Landing Field other than on Runway at Airports” stipulated in the ATC Standard by June 2023.
- In order to minimize the possibility of errors due to an incorrect assumption, they provided all pilots with the training based upon past similar cases by June 2023.