

AI2015-3

**AIRCRAFT SERIOUS INCIDENT
INVESTIGATION REPORT**

**PRIVATELY OWNED
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April 23, 2015



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.

Norihiro Goto
Chairman,
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.

AIRCRAFT SERIOUS INCIDENT INVESTIGATION REPORT

ATTEMPTED LANDING ON CLOSED RUNWAY PRIVATELY OWNED ROBINSON R44 II, JA344T IKI AIRPORT AT ABOUT 12:30 JST, AUGUST 12, 2014

April 10, 2015

Adopted by the Japan Transport Safety Board

Chairman Norihiro Goto

Member Shinsuke Endoh

Member Toshiyuki Ishikawa

Member Sadao Tamura

Member Yuki Shuto

Member Keiji Tanaka

1. PROCESS AND PROGRESS OF INVESTIGATION

On August 12, 2014, the Japan Transport Safety Board designated an investigator-in-charge and an investigator to investigate this serious incident. An accredited representative of the United States, as the State of Design and Manufacture of the aircraft involved in this serious incident, participated in the investigation.

Comments were invited from parties relevant to the cause of the serious incident and the relevant State.

2. FACTUAL INFORMATION

<p>2.1 History of the Flight</p>	<p>(1) The history of the flight is as outlined below, based on the statements of the Pilot, an air traffic flight information officer of the Osaka Civil Aviation Bureau Fukuoka Airport Office Fukuoka Flight Service Center*¹ (hereinafter refer to as “the Information officer”) and officials of the Nagasaki Prefecture Iki Airport Administration Office (hereinafter refer to as “the Airport officials”), as well as records of communications.</p> <p>(2) A privately owned Robinson R44 II, registered JA344T (hereinafter refer to as “the Aircraft”), took off from Saga Airport for Iki Airport (hereinafter refer to as “the Airport”) at 11:57 Japan Standard Time (JST: UTC+9 hours) on August 12 (Tuesday), 2014, for leisure purpose with the Pilot and two passengers onboard, being fully fueled at Saga airport.</p> <p>Having received a report at about 12:21 from a privately owned single engine airplane (hereinafter refer to as “the Single engine plane”), which landed at the Airport, to the effect that the Single engine plane had encountered a bird strike during landing, the</p>
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Information officer asked the Airport officials to conduct the runway check.

- (3) At the time of occurrence of this serious incident, three airport officials were working in the administration office of the Airport.

Two of the Airport officials (hereinafter refer to as “the Workers”) entered the runway on a vehicle for runway check at 12:22, and the runway was closed at that point in time.

After finding the carcass of a bird around the middle of the runway, the Workers went to the approach end of runway 20 to check for any other obstacles. The Workers returned for a time to the office at about 12:27, reported on the situation to the Information officer. The Workers entered the runway again with picking up tools, and starting the work of picking up the carcass of the bird and sweeping the runway.

- (4) Having received a request for landing at the Airport at about 12:25 from the Aircraft, the Information officer provided information regarding the using runway and others. Then, he advised the Aircraft to hold on the downwind leg because the runway check was being conducted due to the Single engine plane encountered a bird strike during landing. The Aircraft replied that it would hold on the base leg, and the Information officer acknowledged.

Upon approaching the base leg, given the fact that there were many sea bathers nearby, the Pilot thought that it would not be possible to make an emergency landing there if anything happened, and given the fact that the Aircraft was a single engine rotorcraft, he also thought that he did not want to hold any more over the sea. On the base leg, the Pilot was able to see the work vehicle and the Workers around the middle of the runway, and thus, the Pilot asked the Information officer if it would be possible to touch down at the end of the runway and wait. The Information officer advised to hold until the runway check was completed, so the Pilot inquired about the holding time.

At about 12:29, the Information officer asked the Aircraft to wait, saying that the runway check would be over within five minutes, whereupon the Aircraft responded that it could not wait for five minutes, so the Information officer asked the Aircraft to wait a little more and requested the airport official who was in the office to make the Workers away from the runway quickly.

- (5) The Pilot had been notified by the Information officer that the holding time would be five minutes, but based on safety considerations, rather than holding on the base leg, he began an approach, intending to hold by hovering around the end of the runway where adequate distance could be maintained while monitoring visually the work vehicle. The pilot hovered at an altitude in ground effect*2 in the area extending from the overrun in front of runway 20 to the vicinity of the

runway 20 approach end. Then, seeing that the Workers on the runway had placed the carcass of the bird into a bag and boarded the vehicle, the Pilot began to move by air-taxiing*³ toward the middle of the runway while meandering so as to ensure enough time for the work vehicle to clear the runway.

- (6) Having received an inquiry from the Aircraft regarding the parking location at 12:30:53, the Information officer informed the Aircraft that the parking location was the south spot. The Pilot replied that he did not understand the marking designating the south spot.

The Workers who were working on the runway suddenly noticed that the Aircraft, which they thought was holding in the air, started to come from the runway 20 approach end side while meandering, and observed how the Aircraft passed through the area between vehicle which was around the middle of the runway and the fence at the perimeter of the aerodrome and entered the apron, and then after circling for a while over the apron, touched down at the south spot while being guided by the crew of the Single engine plane that had landed earlier.

After confirming that the Aircraft had touched down at the parking location at about 12:33, the Workers left the runway on the vehicle and returned to the office, and asked the Information officer about the circumstances whereby the Aircraft had approached the closed runway. The runway was reopened at 12:35, when an airport official had finished communicating the fact that the Workers had left the runway to the Information officer.

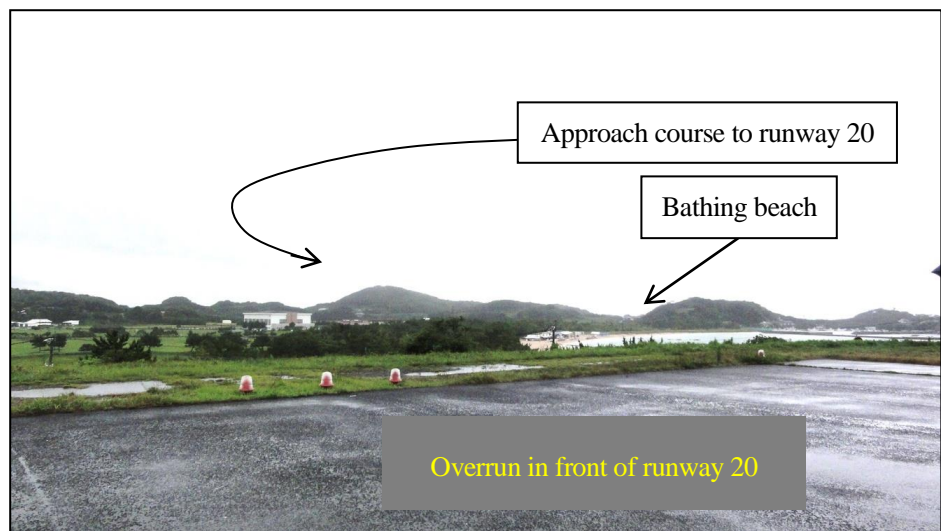
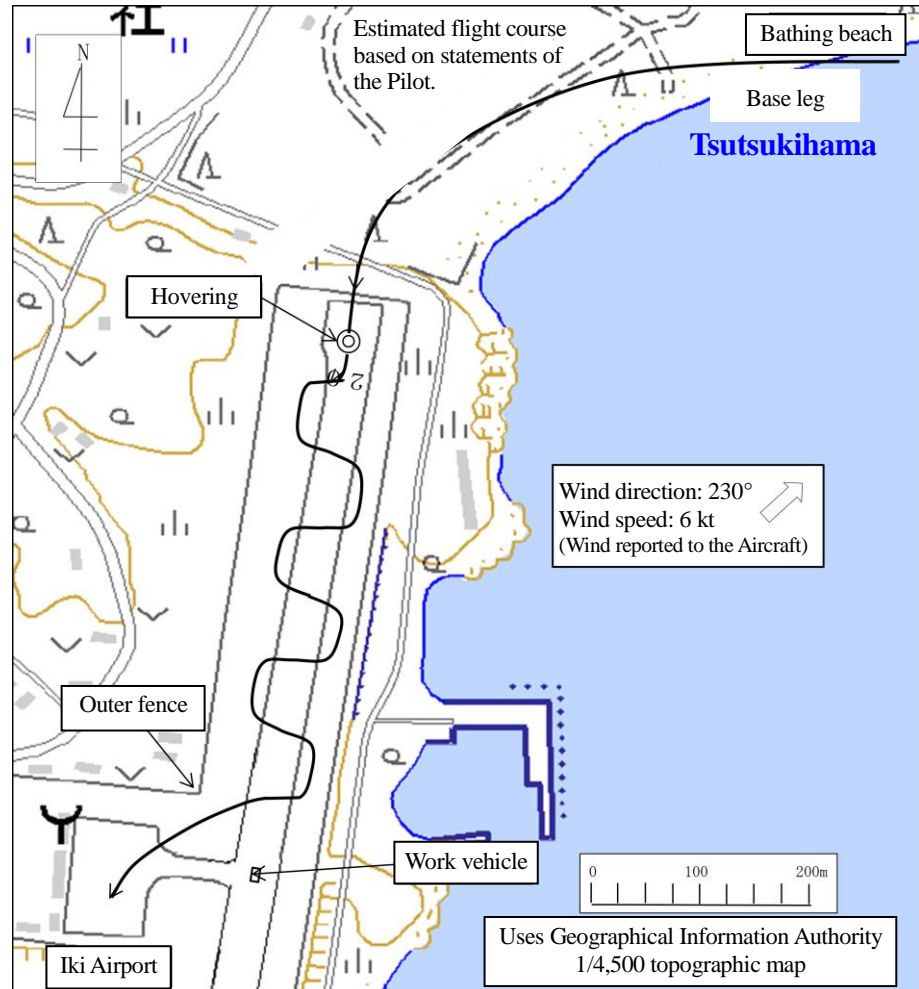
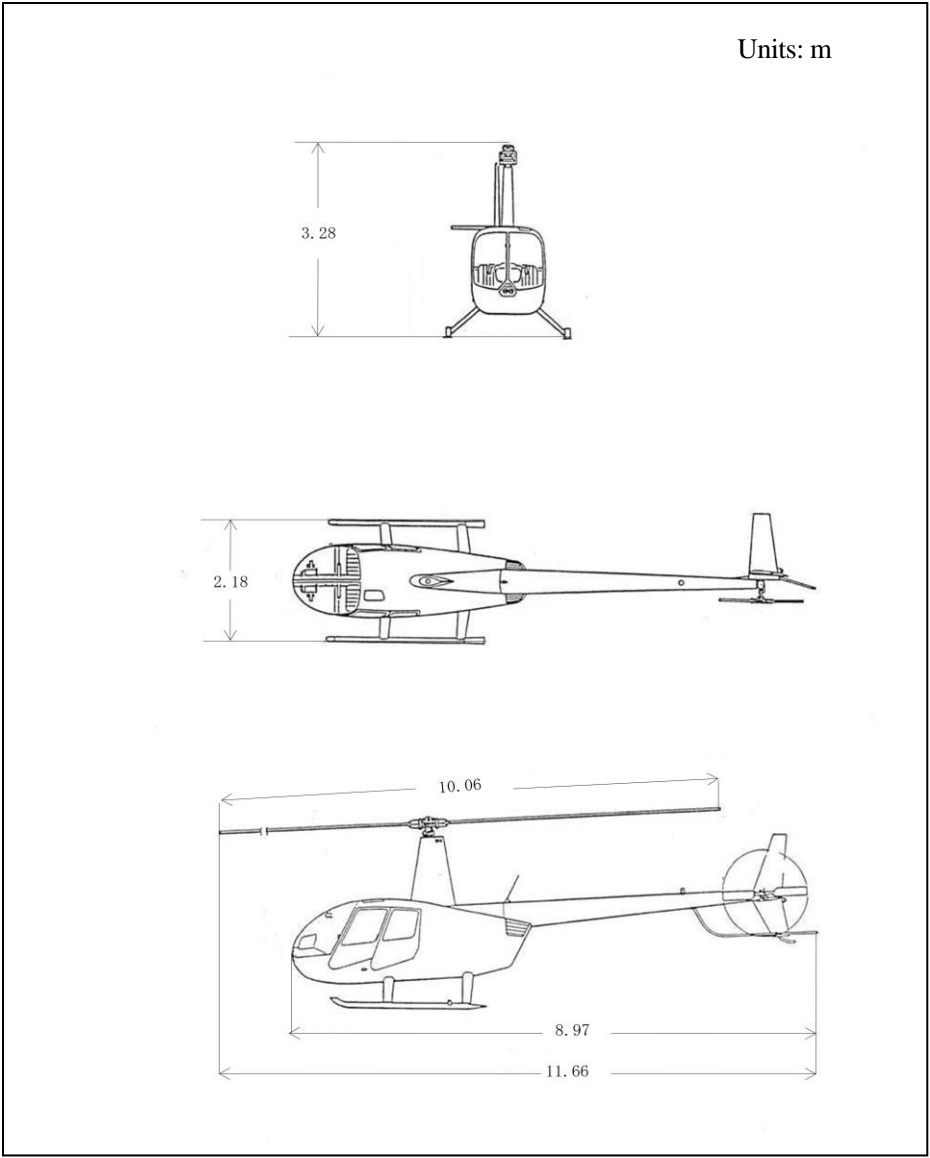


Photo: The approach course side



Estimated flight course

2.2 Injuries to Persons	None
2.3 Damage	None
2.4 Personnel Information	<p>Pilot: Male, Age 64</p> <p>Private pilot certificate (Rotorcraft) September 13, 1995</p> <p>Type rating for Single-engine Piston Land</p> <p>Class 2 aviation medical certificate Validity date: January 29, 2015</p> <p>Total flight time Approx. 6,000 hours</p> <p>Flight time on the type of aircraft Approx. 3,000 hours</p> <p>(Flight time is according to the Pilot's statement.)</p>
2.5 Aircraft Information	<p>Type: Robinson R44 II</p> <p>Serial number 10670</p> <p>Date of manufacture March 16, 2005</p> <p>Certificate of airworthiness No. To-25-500</p> <p>Validity date: January 9, 2015</p> <p>Category of airworthiness Rotorcraft, Normal N</p>

	<p style="text-align: right;">Units: m</p>  <p style="text-align: center;">Three-Angle View</p>
<p>2.6 Meteorological Information</p>	<p>(Meteorological conditions according to airport official statements and wind reported to the Aircraft) Sky: clear, Visibility: more than 10 km, Wind direction: 230°, Wind speed: 6 kt</p>

- *1 Osaka Civil Aviation Bureau Fukuoka Airport Office Fukuoka Flight Service Center carries out “remote air/ground communication services”, providing information necessary for takeoff, landing and others, by radiotelephone for Iki Airport, at which no air traffic controllers are stationed to issue Air traffic control instructions.
- *2 “In ground effect”, in the case of a rotorcraft, refers to the range in which, due to striking of the main rotor’s downdraft against the ground surface, the pressure between the rotorcraft and the ground rises and the engine power necessary for staying aloft decreases. This is an altitude range up to the diameter of the main rotor generally.
- *3 “Air-taxiing”, according to the definition in Annex 2 to the Convention on International Civil Aviation, is the movement of a rotorcraft above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 20 kt.

3. ANALYSIS

3.1 Involvement of Weather	None
3.2 Involvement of Pilot	Yes
3.3 Involvement of Aircraft	None
3.4 Analysis of Findings	<p>(1) Situation at the time of landing</p> <p>When the Aircraft requested landing at the Airport, the Information officer advised the Aircraft to hold because the runway was being checked due to a bird strike, and the Pilot acknowledged that the Aircraft would hold in the base leg as the Pilot intended. It is highly probable that, at this time, the Pilot was aware that landing was not possible and that he would have to hold because there were the Workers on the runway.</p> <p>It is probable that, based on the situation of the base leg and others, the Pilot unilaterally decided that, rather than holding on the base leg even for five minutes, it would be better to hold by hovering around the end of the runway where adequate distance could be assured while visually observing the Workers and others, and that, the Pilot initiated an approach under circumstances where notification had been received from the Information officer regarding the presence of obstacles on the runway.</p> <p>Based on the communication with the Information officer, it is probable that the Aircraft hovered at an altitude in ground effect in the area extending from the overrun in front of runway 20 to the vicinity of the approach end of the runway 20 at about 12:30.</p> <p>(2) Enter into a runway under runway check</p> <p>In a runway check, the condition of a runway on which problems have occurred will be checked and restoration work and others will be performed in order to ensure safety, and thus, depending on the problem which has occurred, the nature of the work, the number of workers and others will change. Even if workers and others can be visually observed from an aircraft in flight, it will not be possible to understand the subsequent work plans and movement of the workers, the situation of problems on the runway and others. In such a situation, if an approach will be made based on the unilateral decision of a pilot without receiving a report to the effect that “work has been completed, there are no obstacles on the runway”, it will be impossible to ensure the safety of both the workers and the aircraft.</p> <p>Therefore, if there are problems with the holding location and others, it is necessary to select a suitable holding location in coordination with the Information officer and enter into the runway after the required holding.</p> <p>Furthermore, air-taxiing in the vicinity of workers at work on a</p>

	runway as in this incident is a hazardous act.
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4. PROBABLE CAUSES

<p>It is probable that this serious incident occurred because, in a situation where the Aircraft had been notified by the Information officer that there were obstacles on the runway, the Aircraft initiated an approach based on the Pilot's unilateral decision that it would be better to hold by hovering around the end of the runway, where adequate distance could be ensured while visually observing the Workers and others, rather than holding on the base leg.</p>
