

AA2015-4

**AIRCRAFT ACCIDENT
INVESTIGATION REPORT**

**PRIVATELY OWNED
J A 4 4 A T**

April 23, 2015

 **JTTSB** *Japan Transport Safety Board*

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 determine the causes of an accident and damage incidental to such an accident, thereby preventing future accidents and reducing damage. 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 ACCIDENT INVESTIGATION REPORT

DAMAGE TO AIRCRAFT CAUSED BY CONTACT WITH TREE PRIVATELY OWNED ROBINSON R44II (ROTORCRAFT), JA44AT THALASSA TEMPORARY HELIPAD, URAMURA TOWN, TOBA CITY, MIE PREFECTURE, JAPAN AROUND 14:45 JST, JULY 26, 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 the Investigation

On July 26, 2014, the Japan Transport Safety Board designated an investigator-in-charge and an investigator to investigate the accident. Although the United States of America, as the State of Design and Manufacture of the helicopter involved in this accident, was notified of this accident, it did not designate an accredited representative.

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

2. Factual Information

2.1 History of the Flight

According to the statements of the captain and the landowner of the Thalassa temporary helipad, who had witnessed the accident, the history of the flight is summarized below.

On Saturday, July 26, 2014, around 14:45 Japan Standard Time (JST: UTC+9hrs) a privately owned Robinson R44II, registered JA44AT, approached the Thalassa temporary helipad in Toba City, Mie Prefecture with the captain and one person onboard. The captain approached from the north due to a southerly wind, and attempted to land at the temporary helipad. However, as several cars were parked near the takeoff and landing area, the helicopter hovered above the south side of the temporary helipad, as instructed by the landowner on the ground.


With the helicopter hovering, the captain attempted to turn its nose to face the north side, in the direction that he would be taking off on his

next departure. In attempting to turn the helicopter, as the vehicle of the landowner was parked on the west side, the captain made a right-turn of the helicopter after checking the distance between the helicopter and the trees on the east side. However, the tail cone made a sound as if it had struck something. The captain did not remember how he landed on the ground after that. Upon watching the helicopter after landing, the captain found the tail cone broken and falling off the back of the helicopter. In addition, several branches from the trees on the east side had fallen onto the ground.

The landowner has approved the use of certain parts of the land as the temporary helipad by guests of the hotel adjoining the temporary helipad. Every time he receives notification about the use of the temporary helipad from hotel guests, the landowner drives to the temporary helipad in order to pick up and take the guests back to the hotel. The landowner had received notification from the captain on the morning of the accident about his use of the temporary helipad. As he knew that several cars were parked near the area where helicopters usually make takeoff and landing at that time, he informed the captain to land the helicopter on the south side of the temporary helipad, away from the cars. The landowner had heard that permission of the law was required for takeoff and landing, but did not know of the details. Therefore, he had not been aware that a takeoff and landing area was specified, nor of the need for ground security personnel to be present. Instead, he thought that the helicopter could land in any open space.

When the landowner went to the temporary helipad at the time the helicopter was scheduled to land, the helicopter was approaching from the north side. Hence, he waved at the helicopter to inform the captain to land closer to the south side. After that, while the helicopter was turning above the landing area, he heard a sound as if it had struck something. The helicopter then landed while wobbling.

	<p style="text-align: center;">Estimated figure of the accident scene based on the statements of the captain and the landowner</p>								
2.2 Injuries to Persons	None								
2.3 Damage	Extent of damage: Substantially damaged <ul style="list-style-type: none"> • Bent of the lower fuselage frame • Partial fracture of main rotor blades • Broken tail cone 								
2.4 Personnel Information	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Captain Male, Age 42</td> <td style="width: 40%;"></td> </tr> <tr> <td>Private pilot certificate (rotorcraft)</td> <td style="text-align: right;">May 18, 2007</td> </tr> <tr> <td>Class 2 aviation medical certificate</td> <td style="text-align: right;">Validity: October 10, 2014</td> </tr> <tr> <td>Total flight time</td> <td style="text-align: right;">230 hours</td> </tr> </table>	Captain Male, Age 42		Private pilot certificate (rotorcraft)	May 18, 2007	Class 2 aviation medical certificate	Validity: October 10, 2014	Total flight time	230 hours
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Private pilot certificate (rotorcraft)	May 18, 2007								
Class 2 aviation medical certificate	Validity: October 10, 2014								
Total flight time	230 hours								

	Total flight time on the type of aircraft	170 hours
2.5 Aircraft Information	Type: Robinson R44 II Serial number: 10014 Date of manufacture: November 22, 2002 Certificate of airworthiness: No. DAI – 2014 – 135 Validity: June 17, 2015	
		
	The helicopter involved in the accident and broken tail cone	
2.6 Meteorological Information	Weather Fine; Wind direction – South; Wind speed – About 2m/s; Visibility – Good (based on statements of the captain and landowner)	
2.7 Additional Information	<p>Permission of proviso of Article 79 of Civil Aeronautics Act required to take off and landing at the temporary helipad had been obtained.</p> <p>In the application to obtaining permission to take off and land at the temporary helipad by the helicopter (hereinafter, referred to as “the Application”), pursuant to proviso of Article 79 of the Civil Aeronautics Act, the following were described as the direction of the takeoff and landing, and the method for keeping around the takeoff and landing area off-limits.</p> <p>(1) Direction of the takeoff and landing: Landing 325°; Takeoff 010° (2) Method for keeping the area off-limits: Place ground security personnel</p>	

3. Analysis

3.1 Involvement of Weather	No
3.2 Involvement of Pilot	Yes
3.3 Involvement of Helicopter	No
3.4 Analysis of Findings	<p>(1) Judging from the damage to the helicopter and the situation regarding obstacles around the accident site, it is highly probable that the tail cone of the helicopter had come into contact with the trees on the east side of the helicopter when the captain had been turning the helicopter to face its nose to the north side, resulting in damage to the tail cone.</p> <p>(2) The captain stated that he had turned the helicopter after checking the distance between the helicopter and the trees on the east side. However, as it is highly probable that the helicopter had come into contact with the trees, it is highly probable that the captain failed to</p>

	<p>judge the distance between the helicopter and the trees.</p> <p>(3) The captain stated that he had approached from the north side, as there had been a southerly wind. However, the operation of the temporary helipad was permitted on the condition that helicopters had in a direction of 325°, and depart in a direction of 010°. Therefore, it is highly probable that the helicopter did not operate according to the application.</p> <p>(4) The captain and the landowner stated that attempts had been made to land the helicopter on the south side of the temporary helipad instead of in the takeoff and landing area, because there were vehicles parked in the takeoff and landing area. Based on this, it is highly probable that measures were not taken to keep around the takeoff and landing area off-limits, and the helicopter did not operate according to the application</p> <p>(5) If the helicopter had approached from the direction according to the application, and landed in the takeoff and landing area, it is probable that there would have been no need to turn the helicopter. It is also probable that there would have been sufficient distance between the helicopter and obstacles to prevent it from coming into contact with the trees. In light of this, it is probable that this accident occurred because the captain had not operate the helicopter according to the application.</p>
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4 Probable Causes

It is highly probable that this accident occurred because the helicopter did not land at the takeoff and landing area, but hovered in a place where there was insufficient distance between the helicopter and obstacles in the vicinity, with the captain failed to judge the distance between the helicopter and the trees when turning the helicopter, which caused the tail cone of the helicopter to strike the trees, damaging the fuselage.

It is probable that the fact that the captain did not operate the helicopter according to the application contributed to the occurrence of the accident.