

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



WPR24LA307

ONBOARD IMAGE RECORDER

Specialist's Factual Report

December 4, 2025

TABLE OF CONTENTS

A. ACCIDENT	3
B. ONBOARD IMAGE RECORDER SPECIALIST	3
C. DETAILS OF THE INVESTIGATION	3
1.0 DEVICE CONDITION	3
1.1 Device Description	4
2.0 VIDEO FILES INFORMATION	5
3.0 TIMING AND CORRELATION	5
D. SUMMARY OF EVENTS.....	5

A. ACCIDENT

Location: Basin, Montana
Date: September 15, 2024
Time: 1700 Mountain Daylight Time (MDT)
2300 Coordinated Universal Time (UTC)
Helicopter: Robinson Helicopter R44 II, Raven II LLC, N233WT

B. ONBOARD IMAGE RECORDER SPECIALIST

Specialist: Michael Portman
Senior Aerospace Engineer – Recorder Specialist
National Transportation Safety Board (NTSB)

C. DETAILS OF THE INVESTIGATION

In agreement with the Investigator-In-Charge, an Onboard Image Recorder group was not convened, and a summary was prepared.

The NTSB Vehicle Recorder Division received the following onboard recorder:

Device Manufacturer/Model:	Robinson Cockpit Camera
Part Number:	N/A
Device Serial Number:	4C0713

1.0 Device Condition

The camera arrived exhibiting signs of mild impact damage (see figure 1). The device contained a microSD card which was in good condition, and the data were downloaded using the manufacturer's procedure.



Figure 1. Robinson Cockpit Camera, as received by the Vehicle Recorder Lab.

1.1 Device Description

This helicopter was equipped with a built-in video and data recorder. This recorder is manufactured by Rugged Video and custom installed on Robinson helicopters. The recorder captures video and audio data as well as basic parametric data including GPS-based position information, and inertial data such as acceleration and attitude information.

2.0 Video Files Information

The accident recording was made at a resolution of 3840x2160 pixels at a frame rate of 30 frames per second (fps) and was 6 minutes and 56 seconds in duration.¹ Two associated audio tracks were also recorded from the camera's internal microphone (ambient cabin audio) and the helicopter's headset audio system. The camera was mounted to the internal frame of the helicopter and was oriented to show a forward-facing field of view that included a view of the instrument panel, cyclic, collective, and rudder pedals.

The parametric data were reviewed and deemed to be non-pertinent for this event and therefore is not provided.

3.0 Timing and Correlation

The video file's metadata included a recording start time of 2308:44 UTC. This time was used as a starting time for the events in the video. An additional 6-hour offset was applied to convert the recorded time to local MDT. No additional external timing sources were available to validate the recorded times, and as such, the times presented are considered approximate. Therefore, for the rest of this report, times will be expressed as local MDT.

D. SUMMARY OF EVENTS

Table 1. Summary of Events.

TIME MDT (HH:MM:SS)	OBSERVATION
17:08:44	The video began. The helicopter was starting up and the rotor was beginning to turn. The pilot was engaged in preflight activities including engine start and GPS programming.
17:10:01	The crew donned their headsets.
17:10:06	The pilot corrected the altimeter to read approximately 7,150 feet (ft).
17:10:18	Both engine and rotor RPMs reached 100%. The pilot discussed with the left-seat passenger a plan to hand over controls after they successfully took off. Additionally, the pilot discussed general performance considerations and advice for takeoff strategies.
17:11:00	The helicopter lifted off into a hover. The helicopter slowly reversed and turned left over a body of water.
17:11:11	The full throttle light illuminated. The pilot commented on the full throttle status.

¹ Reported pixel dimension and frame rate are based on metadata embedded in the file. Files that have been modified from their original version may have incorrect metadata.

17:11:26	The helicopter reached an altitude of approximately 7,200 ft and stopped climbing. The pilot reacted in frustration, commenting that the helicopter wouldn't go any higher.
17:11:33	The helicopter began descending. The pilot commented that he had not moved the collective.
17:11:53	The pilot commented that they were unable to depart the location and maneuvered to land the helicopter.
17:11:55	An unseen back-seat passenger asked if he should hop out, and the pilot replied not yet.
17:12:01	The full throttle light extinguished. The pilot commented that they were back in ground effect, thus eliminating the full throttle condition.
17:12:10	The pilot attempted to increase altitude again, and the full throttle light illuminated again.
17:12:18	The helicopter stopped climbing. The pilot asked a passenger how much he weighed, and the passenger replied 140. The helicopter began descending shortly thereafter.
17:12:28	The full throttle light extinguished.
17:12:34	The helicopter touched down again
17:12:39	The pilot commented, "well one of you guys is gonna have to fly to the meadow." The pilot also commented that he did not want to fly there. The persons onboard discussed other locations for pickup.
17:13:16	A rear-seat passenger commented that he would hop out, and the front-seat passenger commented that he would do the same. The pilot responded, "eh just as sec."
17:13:22	The pilot commented that "cooler temperatures or better wind is key." The pilot additionally mentioned that one could "fly in a little circle," but that it's "not super recommended."
17:13:35	A passenger commented that there was not a lot of room for a circle to which the pilot responded, "I know I know."
17:13:48	The pilot commented, "let me just play around here for a second."
17:13:54	The helicopter slowly lifted into a low hover.
17:13:58	The full throttle light illuminated. The helicopter yawed right and began to climb slightly.
17:14:07	As the helicopter continued to turn right, a warning horn sounded, and a light illuminated on the annunciator panel. These warnings continued throughout the remainder of the flight. Additionally, both engine and rotor RPMs reduced to approximately 95%. The pilot reacted in frustration.
17:14:09	Both engine and rotor RPMs reduced to approximately 90%.
17:14:10	The helicopter shallowed its right turn after having turned approximately 270 degrees.
17:14:12	Both engine and rotor RPMs reduced to approximately 85%.
17:14:16	The helicopter reached a maximum indicated altitude of 7,220 ft. The helicopter's right turn rate began to increase again.

17:14:20	Both engine and rotor RPMs reduced to approximately 80%.
17:14:24	Both engine and rotor RPMs increased to approximately 85%.
17:14:29	Both engine and rotor RPMs reduced to approximately 80%.
17:14:32	Both engine and rotor RPMs reduced to approximately 70%. The helicopter began rolling off to the right side and descending rapidly.
17:14:34	The helicopter impacted the terrain. Both engine and rotor RPM indications were approximately 60% at the time of impact.
17:15:40	The video ended.

Submitted by:

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